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Original Department.

Cascara Sagrada and Its Physiological Action.

By C. W. Tangeman, M. D.* Cincinnati, Ohio.

Once more Cascara Sagrada. Those who have followed the literature of this subject in the Therapeutic Gazette since its introduction, may possibly think it a waste of time to attempt to add any more; or impossible to produce anything new that will prove to be of interest to the medical profession. A certain class of individuals are satisfied and contented to administer an agent without much concern as to how it acts, only so they obtain a result. If the exact physiological action cannot be determined, then it is well enough to study the effects clinically that the drug produces; but every one can readily see the drawbacks of such methods of investigation.

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It is not positively known whether cascara sagrada acts by stimulating the glandular secretion only, without peristalsis, or whether peristalsis is the main feature, and the glandular secretions are stimulated by the irritation the drug produces when coming in contact with the mucous membrane, similar in action to an errhine, which causes an increased flow of mucus from the Schneiderian membrane by simple irritation. The question is, what special difference or advantage is there in knowing these points? There are prominently two reasons why we can profit by information on this subject; excrementitious matter is made up of undigested particles of food, and a large portion is a secretion poured out from the inner surface of the bowel. If an excess of excrementitious matter is found in the blood, due to a retention or an over-production, its removal becomes very simple by the employment of a drug that will stimulate the glandular secretory apparatus to increased activity, and in that

manner produce elimination. When the question is one simply of removing fæces from the bowels, then a different remedy entirely can be given. There are also pathological conditions of the abdominal organs which require absolute care in the selection and administration of cathartics; the negligence of which undoubtedly has contributed largely to the fatality of many cases.

We know that colocynth is a hydragogue purgative or gastro-intestinal irritant; ordinary doses hasten the peristaltic action, increase the secretions of the bowels, while larger doses may cause violent gastro-enteritis. The question before us is this: does cascara belong to a class of medicines that are called laxatives, that produce their effects by stimulating the intestinal movements, without increasing to any considerable extent the secretions; or is it a tonic astringent purgative which acts by affecting the glandular appendages of the mucous membrane, and at the same time stimulates the tonicity of the muscular layer of the bowel? In large doses laxatives produce an outpouring of fluid which is mainly from the vessels. The determination of these points can only be demonstrated by physiological experiments. Relative to the effects of cascara nothing has been recorded, physiologically speaking. Clinical observation has not produced anything definite, which is plainly proven by the conflicting statements that are published from time to time. One writer states it acts on the muscular fibre of the intestinal canal, thereby increasing peristalsis; another that it acts on the duodenum; a third that its effects are entirely spent on the rectum; while a fourth theory claims the effect to be due to an increase of secretion from the intestinal mucous membrane. These data are results of clinical investigation, and are good enough as far as they go. The probabilities are even that one of these theories may be correct; but it can only be of value when absolutely confirmed by experiment. Here lies the reason why some practitioners report failures after the administration of certain remedies. They first make an error in the diagnosis of the case, and next they do not understand the action of the drug they employ, either relatively nor absolutely. There are few remedies. Yes, we may say positively there are no specific medicines in the true sense of that word; and any individual advocating the use of cascara as a specific in any form of disease, does not fully understand the meaning of the word.

Shortly after the introduction of Rhamnus Purshiana certain pharmacists declared that the active principle was nothing more than resin of podophyllin which the manufacturers added with a bitter principle to a proper menstruum, and then labeled Fluid Extract Cascara Sagrada.

Such adulteration is not necessary, since it is a settled fact, known for years, that all the species of the genus rhamnus contain cathartic properties. To have obtained cathartic effects simply there was no need of counterfeiting; a great difference can be demonstrated clinically, as well as physiologically, between the two drugs, which is the best proof that the assertions were made out of mercenary feelings. The reason rhamnus frangula and one or two other species of this family cannot be used with satisfaction, is on account of their irritating properties, much of which is lost by drying, and by age, but nevertheless the therapeutic application is not any more desirable than the ordinary evacuants. The reason why the species Purshiana is so highly praised is because it is devoid of the objectionable features that are present in the other species of the same family; it has no irritating properties and is very efficient. It is generally prescribed in the form of a fluid extract and while it is not officinal* it is rapidly coming into use. Its taste is very bitter which is due to a resin; it has often been suggested that the bitter principle be separated to make the remedy more pleasant to administer, but that is the essential principle which must be retained.

The question as to the cure of constipation or diarrhœa by this remedy, will depend entirely on the answer to the question that has so frequently been asked; how does cascara sagrada act? It has been pretty conclusively shown that when employed in over doses (3 i doses repeated frequently), the permanent good effects are very much retarded, or do not appear at all. The effect in fact is no different than the results produced by the use of any resinous cathartic. On the other hand when small doses are administered for some time, the result is permanent and pleasant.

If these questions can be answered after experimental investigation, a much larger field of usefulness will certainly be opened up for cascara sagrada; especially since it is being used so extensively new properties may be discovered. All experiments that I made were performed on dogs, since the investigation could be carried to any point, and the animal killed when not wanted any longer. I will give a short description of some of the experiments as they were made at my laboratory for physiological research. Dr. L. Locke, Assistant Demonstrator of Anatomy at the Medical College of Ohio, kindly assisted me. In the first series of experiments we aimed to study the beginning of the action both in large cathartic and in small doses, and how soon after administration the effect could be noticed. In the next class the action was observed after the remedy had been given long enough to produce its full effects. In the last series of experiments the drug was administered hypodermically, not so much to simply gratify a curiosity, as for the purpose of comparing the results with the former experiments; to study the effects when the remedy does not enter the stomach or intestinal canal, and, therefore, must necessarily produce its action through the circulation. It would be very interesting to find a remedy that could be employed by injection, without producing the objectionable results that usually follow this method of administering cathartics. I say bad results that usually follow; only quite recently Hiller investigated this subject extensively, and his conclusions were that he has not found a drug that could safely be recommended for this purpose. The reasons why, would carry us too far from our subject. In the first experiment a medium-sized dog was given two drachms of the fluid extract, by the mouth; after which he was allowed to run around as usual. In the course of 45 minutes he was placed under the influence of an anæsthetic, and the abdominal cavity opened for the purpose of observing the effect, if any, on the different organs. The first

* By term officinal medicine we mean such as are embraced in the United States and British Pharmacopœias.

point of importance was the condition of the vascular system: the vessels up to the smallest capillaries were very much congested. Second, there was present an unusually rapid peristaltic action, the movements of the intestine were more marked than if they had been stimulated by electricity. A portion of the duodenum was carefully emptied and placed between clamps so as not to interfere with the circulation but shut out all fluid save what came through the mucous membrane. At the end of five minutes the clamped portion was opened, the mucous membrane was only covered with a moisture, which was examined under the microscope, and found to be a glandular secretion. At this point the animal was killed. We had found that peristalsis was increased before the glandular secretions were augmented; also that the drug commences to act in the course of 45 to 60 minutes after administration. In another case we employed only a small dose, about 20 drops given by the mouth. In this instance the animal was not anæsthetized, but simply fastened, and the abdominal cavity opened, in order to observe the effect without the secondary effect of another drug. The manifestations were somewhat similar to the above experiment, though not so marked, but the dose was small and the examination was made to study the beginning of action. In the second class where the examinations were made after the drug had produced its full effects, the appearances were well worth seeing and studying. A large dog was given about four drachms of the fluid extract and after three hours he was etherized and the abdominal cavity was opened for inspection. Peristalsis was exceedingly rapid, of a circular vermicular action in the small bowels and of a longitudinal nature in the colon. The muscular fibres of the intestines were evidently stimulated through the effects of the drug. The movements were simply wonderful; In the small intestines where the circular fibre is largely found, the motion was vermicular; in the large intestine, especially the rectum, where the longitudinal fibres predominate, the motion was to and fro. There would be 3 to 4 short contractions, (about ⅛ in. long), as though gathering up force for a violent effort, and then there would appear a long, powerful contraction changing the relative position of the bowels ¾ inch. The manner in which this motion occurred showed plainly the effect of the drug on the involuntary muscular fibre.

The circulation, especially in this case, was very much stimulated, every heart-beat could be distinctly seen in the smallest vessels. In order to determine whether the secretion under this powerful stimulus would be simply glandular, a portion of the jejunum about three inches in length was gently emptied of its contents and placed between clamps, and the viscera were all replaced and covered by the abdominal walls to render the condition as near a normal one as possible. At the expiration of 15 minutes the portion of the intestine was removed and opened; it contained 1½ ʒ of liquid, mucus and serum; the larger part was serum and originated from the vessels by osmosis. The animal had not been fed for some time and the secretion was evidently nothing but what was due to the stimulating action of the administered drug. While this was an unusually large quantity of secretion from so small an extent of surface it must be kept in mind that the dose was large, given so purposely in order to bring out the full effects. Large doses always have these effects; and the only point that remained for investigation was to employ the remedy subcutaneously. The last series of experiments were not made only to convince ourselves as to the cathartic properties, or the efficiency of cascara administered under the skin, but also to establish positively how much of its effect is due to direct contact with the mucous membrane of the stomach and intestines. The question, can we obtain cathartic effects from remedies employed in this manner, has been studied by a number of investigators and considering it from a theoretical standpoint, we are positive of results, but whether the theory can be practically applied, that is a matter of the future, as we can see from the work of Hiller who says, "even with the large variety of medicaments at our command we have not been able to find one that is reliable and can be recommended to the profession for practical purposes."

In the instance under consideration, I injected 90 minims of the fluid extract under the skin of the abdominal region, thereby putting it to the severest test, since an abscess is more readily produced in this locality than where the skin is thicker; (the animal had not been fed but very little for fully 24, hours). In the course of 2 hours he had an evacuation; which from appearances was simply rectal, and normal in consistency. This experiment verified the results of some of the former investigations, namely, that the rectum is especially acted upon. Slight œdema and sensitiveness marked the place where the injections were made. Excluding this there were no objectional features to be seen; future observations may lead us to find a better menstruum in which to administer the drug.

Not to worry the reader with any more detail of experimentation, we will sum up our conclusions as follows:

1. Cascara sagrada, when given in small doses (15 to 20 drops) acts like a vegetable bitter on the stomach; it increases the flow of gastric juices, stimulates the peptic glands to increased action, thereby bringing about healthy gastric digestion.

2. It acts on the sympathetic nervous system, sending an increased blood supply to the intestines.

3. It increases to a limited extent peristaltic action of the small bowels; but increases it very much in the colon, and especially in the rectum.

4. It has a specific action on the rectum in the way of peristalsis, to cause this portion of the bowel to unload itself.

5. It does not affect the passage of food in the small intestines, any more than a bitter tonic would.

6. It is not a safe remedy to prescribe in pregnancy or uterine disorders, especially when given in large doses.

7. It does not affect the larger glandular organs, liver, pancreas or spleen, even when given in cathartic doses.

8. Hypodermically the remedy will never produce the permanent good results in chronic constipation that are obtained when it is given by the mouth.

9. When employed subcutaneously it acts simply as an evacuant to the rectum.

10. The same quantity given hypodermically that produces marked effects when administered by the mouth, will not have the same effect clinically or physiologically.

While cascara has a specific effect on the rectum

only, we would not find it nearly so efficient were we to depend on this effect wholly in the treatment of constipation. The action of cascara on the stomach and mucous membrane of the intestines is precisely what is indicated in most of the cases, and these together with its specific effect we can clearly understand why small doses act better to produce permanent results than large ones.

Why this drug has been successfully employed in some cases of diarrhœa is very easily explained after observing the action of it physiologically. It is not to give tone to the muscular fibre of the intestine, as has been supposed, but since all cases of chronic as well as acute diarrhœa have a cause, the treatment is the removal of the cause. If, for example, the cause lies in the presence of some obnoxious principle in the blood, the only plan of treatment should be the removal of it, for as long as it is allowed to remain it has a tendency to affect the glandular structure of the mucous membrane as an irritant; therefore the continuation of the disease despite astringents. The administration of a purgative, especially one that is so efficient as cascara in increased doses, will eliminate the poisonous matter, bring about a healthy action of the secretory apparatus, and the case will be speedily relieved. It is very plain when observing the effect of this drug why failures are occasionally reported. A lack of knowledge, a mistaken diagnosis, and an indiscriminate use of the remedy explains it all. It manifests the same action whether given to a blonde or a brunette, old or young, male or female, as I demonstrated practically at my laboratory. Here another question arises that will bear investigation. In Medicinische Chirurgische Centralblatt, No. 40, pp. 468, I find an article* which purports to be a translation of Dr. Bundy's investigations of cascara sagrada. "It acts on the secretory apparatus in a wonderful manner." At the same time he specifies the dose that should be administered, it being a small one, but we must contradict that statement and say it does not increase the intestinal secretions any more than does gentian or wild cherry preparations. "Cascara, furthermore, acts on the secretion of the liver, and the circulation of this gland, more positively than any other remedy;" clinical observations may seem to point in that direction, but physiological research on animals shows absolutely and positively that its action on this organ is not worth mentioning, therefore we must contradict the assertion in a most emphatic manner, and we will offer reasons why, and on what grounds we base our opinion. "In diseases of the liver I combine it with nux vomica, and nitro-muriatic acid," this combination might have some effect on the liver. Rogers,† on a recent article on cascara, gives its action, in a somewhat similar manner to Bundy, but his judgement may be based on clinical observation and the current literature on the subject, which seems to be all of the same tone. In an article by Wright,‡ of Bellefontaine, O., the theory certainly comes nearer the action of cascara and what properties a remedy for the cure of chronic constipation should possess than any article to which we have had access.

* Article on Cascara Sagrada, in New Preparations.

† Medical News, No. 565, p. 506, Herbert C. Rogers, M. D.

‡ Observations on Habitual Constipation and upon Cascara Sagrada as a Remedy for It. Cincinnati Medical News, Vol. xii, No. 10.

It must be a drug that has certain beneficent and reliable therapeutic properties combined with laxative qualities, otherwise we cannot obtain the results so very desirable. Compare the common causes which are active in producing and sustaining constipation, with the effect that simple bitters has on the digestive apparatus. The simple bitters increase secretion from the mucous membrane; in the stomach they appear to increase the quantity of gastric juice as well as increase the quantity of gastric mucus. From these two facts it follows that they increase the digestive capacity. The improved digestive power which enables more food to be disposed of and the sense of bitterness which has a tendency to increase the desire for food, explains the reason why the appetite improves under a course of these remedies. Bitters favor assimilation by removing morbid states of the mucous membrane of the intestines. Having made the comparison, we can readily see that the causes of constipation, other things being equal, are very readily removed or strongly acted on by the use of even simple bitters. In this instance our medicament possesses these properties and also has the other properties that make the drug so valuable. But to come back to the reasons why we can say that the secretion from the liver and intestines are not specifically acted upon by cascara in ordinary doses; is, in the first place, by actual observation of animals under the influence of the drug, and second, by employing it subcutaneously. In the last named method of investigation the tonic and bitter effects on the stomach and bowels are necessarily lost, and only such properties as will act through the circulation are brought out. And what are the results? that even in large doses hypodermically we cannot record any action save on the rectum; only a rectal evacuation occurs. In such cases where a biliary fistula was made, and later in the experiment the organ was inspected, could we convince ourselves that the secretions from the glandular organs were not at all increased. Should the administration of cascara cure a case of jaundice it would not necessarily prove that the cure was brought about by acting on the liver, since there are various causes that can bring about just such a condition without the secretory or excretory function of the organ being acted upon. All the experiments were repeated and verified, and the only specific effect that cascara possesses, is on the rectum. When given in large doses, 1 to 2 teaspoonfuls, the secretions into the intestines both glandular and an osmotic flow from those vessels are increased; peristalsis is hurried throughout the intestinal canal.

The preparation known as Cascara Cordial owes largely its efficient properties to the cascara sagrada that enters into it, while the other constituents have a tendency to increase the effect of a principle already found in cascara, namely, its tonic properties, as its published formula will indicate.

This preparation has the same effect physiologically that cascara has, though it must be given in much larger doses. Clinically, it has become quite a favorite with a large number of the profession, being more pleasant to administer, while the addition of the other drugs really only enhances the value and increases the field of application, provided a perfectly reliable article can be obtained. The observance

of this last admonition is so necessary that one can almost be positive an adulterated article has been used when unsatisfactory reports are made by patients.

Notes on the Therapeutical Effects, and the Special Applicability of Cascara Cordial.

By T. L. Wright, M. D., Bellefontaine, O.

In a brief notice of Cascara Cordial presented in the Cin. Medical News for October, of the present year, I promised to give some further report on the powers of that remedy. It will be remembered that two cases of obstinate constipation were therein described somewhat in detail. Of those cases it is proper to say a word or two in conclusion. Both the patients, (ladies over fifty years old), declare that they remain much improved in health, and in flesh, and spirits. The medicine is still employed by each of them, and according to their assertions, it is much more satisfactory in its effects than any other remedy they have ever used. It is proper to say, however, that the dose taken, is, perhaps, a little larger than was reported before; it requiring from 20 to 30 drops to prove quite satisfactory. But it is no longer necessary to take the medicine daily. Intervals of two or three days between doses are not infrequent. I may say in addition that, in my opinion, if these patients were not quite so well pleased with the cordial, they would get along better still. I mean by this that they rely so exclusively upon the remedy, that they neglect very important matters of a dietetic and hygienic character, which would no doubt simplify their therapeutic requirements to such a degree that much smaller quantities of the cordial would suffice.

As I think a short synopsis of real experiences will be more satisfactory than general assertions, I will give additional instances of actual trials of the remedy so as to more fully illustrate its powers:

W. B.——, male, aged 53 years; was troubled with constipation for four years, which gradually became more and more obstinate in its nature. He is a carpenter by trade, and is rather thin in flesh, and of a somewhat delicate constitution. This patient consulted me on the 21st of September last. He was considerably emaciated, and had an unhealthy and dirty yellowish color. The expression of his countenance was indicative of distress, mental and physical. This patient is slow to consult physicians; but he had of his own volition, employed a variety of cathartic medicines, with little substantial relief. His own declaration was, that he had "dyspepsia," and he complained of pain in the pit of his stomach. The skin was not only sallow, but it was quite dry. There was no probable kidney trouble, but sickness of the stomach, and distress in that neighborhood, were prominent symptoms.

I prescribed for this gentleman cascara cordial, and furnished three ounces of the medicine; was surprised, as time passed, that I saw no more of my patient. Upon inquiry of other members of his family I was informed that he was better. On the 10th of November, inst., Mr. B—— again called upon me. Said he was greatly improved, and his appearance plainly justified his words. There was an evident increase of life and energy in his whole make-up, and there was light in his eyes. He wished to continue the treatment and desired another supply of the cordial. He said however, that the doses he had been compelled to take were larger than had been prescribed—which were 15 drops twice a day. He declared that his improvement was remarkable to his own mind, and volunteered the statement that his evacuations had lately been perfectly efficient, easy, and in every way more satisfactory than they had been for a long time previously. This man has now taken only about four ounces of the preparation.

And here I will make a suggestion or two, with reference to the adaptability of the cascara cordial to certain forms of physical condition. When the grand climax of life has been passed, both in women and in men, when the failing sight, the subsiding passions, the lapse in memory, and muscular inertia, tells the unwelcome story that the acuteness and alertness of nervous sensibility, in all its diversified phases, are being dulled by age and subdued by the reverses of time, it is the experience of physicians that the great conservator of life and energy, itself—the digestive and assimilative tract,—sympathises with the general decay, and constipation is a frequent, if not common co-incident. It is in the treatment of such cases in particular, that our remedy appears to the greatest advantage. From the observations that I have been enabled to make, the cascara sagrada, especially in the form of the cordial, seems to me to afford better results in the constipation of elderly people, than any other medicine that has come under my notice.

I will now report two cases presenting somewhat different characteristics from those already described. Mrs. H——, aged 24 years, is a very light blonde. Her complexion is almost milky white; her hair is a very light flaxen; and her eyes are large and very light blue in color. This patient's countenance was melancholy and unfixed, and her eyes were weak and tearful. Her voice was tremulous and feeble, while her general manner was shrinking and timid. Mrs. H—— was afflicted with constipation of a most obstinate character, which dated back four years. It seemed to be impossible for her to secure an evacuation of the bowels without artificial aid—going without one often, from five to eight days. After trying several remedies with poor success, I furnished her with three ounces of the cascara cordial. She took one-half teaspoonful twice a day. After exhausting the first installment of the remedy, she applied for more, and said she felt better, although she obtained an alvine evacuation only about every second day. After consuming the second three ounces of the medicine, she again applied for an additional quantity. Her appearance was now materially changed for the better. Her features were expressive of a good deal more energy than usual; her flesh seemed something fuller, her eye brighter and more expressive, her voice was stronger and firmer; and at this time she smiles and looks as though she enjoys life. Upon inquiry she said that the cascara cordial is the most efficacious of all the remedies she had ever taken; that she is feeling better in every way, but that she could not get along without continuing the treatment. She also informs me that her spirits are now good; whereas, before the treatment above described, she felt melancholy, and often did not wish to live.

Upon the whole, I believe the patient will ultimately recover her health, al-

though, (and so I informed her,) it will probably take months of patient hygienic, and medical assistance to accomplish a cure.

Another example that is instructive, is that of a child four years of age. This little boy has been troubled with constipation from birth. Such instances are by no means rare, and they are always the subjects of great anxiety and trouble. The child in question, was treated in the beginning by suppositories; first, of soap, until inflammation of the rectum nearly ruined him. Afterwards, pieces of mutton tallow, or stearine were employed; and at last frequent injections of various kinds were used. But in spite of all, he would, every few weeks, exhibit such indications of distress as are seen in a sallow complexion, haggard countenance and fretful manner.

Then resort was of necessity had to cathartics by the mouth. Of course, all this was attended by many untoward symptoms—as of nervous irritability, nettle-rash, and so on.

Between two and three months ago, I prescribed for this child the cascara cordial. Never was any medicine more pleasing in its effects. The dose employed was pretty large,—from 15 to 20 drops twice a day; but it was not necessary to give the medicine steadily. Two or three days of interval are now frequent between doses. The little fellow is fat and happy, and is willing and eager to take his medicine.

But he is by no means cured. He will, no doubt, be compelled to continue the drug for some months, before he can forego it altogether.

And here I wish to be indulged in the remark, that in this cordial I have found for the first time, a becoming remedy for constipation, *well adapted to the use of children and delicate women.* The horrors attending the administration of nauseous drugs to little children are dissipated, when the cascara cordial is employed. And his must be a bitter heart indeed, which will not rejoice in the discovery of an efficient means of alleviating infantile distress and danger, without a compulsory resort to bitter and disgusting drugs.

I have administered the cascara cordial to several other patients with variable success. These have been persons who require speedy relief from every portion of medicine taken. When I perceived what the expectations of these patients were I quietly abstained from further effort, knowing that their demands were unattainable.

I am far from believing that the cascara cordial will act equally well upon all constitutions. I have seen enough to convince me that it is not equally adapted to all persons. Still, I never perceived the slightest evidence that it possesses any properties that are inimical to any constitution. I do not suppose that its therapeutical effects can ever be entirely perfect and beyond criticism. I am aware that good remedies are often vaunted with such expressions of exaggerated praise, as must lead to final disappointment. Perfection in human relations, either amongst men themselves, or between men and the external world, is not of accord with the nature of man, sick or well. But I am constrained to say that in my judgment, the cascara cordial prepared by Messrs. Parke, Davis & Co., represents therapeutical properties of an exceedingly valuable kind, and of very wide and important application; while the handsome appearance, and pleasant taste of the preparation, very greatly enhances its value.

The cascara sagrada seems to me to fill a place amongst cathartics that will prove useful. It appears to be peculiarly adapted to those cases of defective innervation of the alimentary tract, depending upon constitutional causes—no matter whether the subject be the aged and worn out, or the young and feeble.

Cascara Cordial in Dyspeptic Disorders.

By F. C. Herr, M. D.,* Philadelphia, Pa.

IN an article upon the subject of the therapeutic uses of cascara cordial, in the Medical and Surgical Reporter, I particularly urged that the efficiency of the preparation in the treatment of habitual constipation marked it for great favor. A more extended experience with it in this sphere of application has only added proof of its therapeutic value. By the test of experience every medicinal agent must stand or fall. We are confident and glad, too, that this preparation will grow in favor and become one of the verities of the medicine chest. In our former publication we also indicated the use of cascara cordial in the treatment of various forms of dyspeptic disorder. Added experience has shown that what was then stated and claimed for it embraced only a part of its great merit in these conditions. Here it meets a wide range of indications and certainly must become a favorite remedy with the practicing physician. All in all cascara cordial may be regarded a valuable addition to the physician's armamentarium. Its authors builded better than they knew. In an unusual degree they have here made the refinements of scientific pharmacy subservient to the demands of the people and the times. The encroachments of homœopathy upon regular medicine have only been made possible by the persistent refusal of the old school to accede to the demands of the sick public for tolerable medicines. For generations we were indifferent to the cry of our patrons for some alternative that would relieve them from the necessity of taking noisome drugs. In later times we slowly awakened to the reality of the situation. To-day we recognize in its fullness the importance of bringing to our aid the elegancies and refinements of pharmacy. We are persuaded that these may be made potent levers to our advancement and elevation. It does not help us that we belong to the "old school." Independent of schools each man in the profession must make his record. A palatable medicine is money in the doctor's pocket. He cannot afford in the face of a growing sentiment against it, to trudge along in the well-worn path of our predecessors. We cannot afford to go backward. Let us then honestly endeavor to go forward in the path indicated by these improved pharmaceutical preparations. Pharmacy and medicine are not essentially antagonistic. They should always assist each other, for out of such united and harmonious work could come only that which would profit both equally. It is a step in the right direction, and deserves to be encouraged. If Messrs. Parke, Davis & Co. will exert themselves in the direction of improving the Newer Materia Medica in just the way that they have surmounted the objections to cascara sagrada, they will confer a blessing upon many sufferers and greatly aid the practicing physician.

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* Physician to S. W. Hospital.

One use of cascara cordial not yet referred to here we shall briefly consider. It is its employment as an adjuvant. It has been highly spoken of in this connection and it is unquestioned that neither the older nor the newer materia medica afford an agent in any respect superior to cascara cordial in this specific use. Indeed, we doubt whether another preparation equals it in this application. For, in addition to its very agreeable taste, it possesses such decided therapeutic properties of its own that these make it valuable in many conditions of disordered functions. The early reports upon cascara sagrada (the active cathartic or laxative ingredient of cascara cordial) indicate the desirability of permanently concealing the intensely bitter principle which develops with age. The efforts of Messrs. Parke, Davis & Co. were successfully exerted in this direction, and as the fruits of their labor we have cascara cordial. Another valuable ingredient of this preparation is berberis aquifolium. Clinical experience has shown this agent to be a powerful tonic and alterative. By some it is maintained that it is second to no representative of this class of remedies in power and efficiency. It promotes destructive and constructive metamorphosis—the former by exciting absorption, the latter by stimulating digestion and assimilation. It is shown by abundant experience that it is invaluable as an alterative in syphilitic disorder. It is *per se* an important addition to the materia medica. In combination with the various components of cascara cordial it is serviceable in a wide range of disorders. Take hepatic torpidity, for example, with its endless diversity of symptomatic expression. Try all the well-worn cholagogues faithfully, and then as faithfully try cascara cordial, and your testimony will be against the former. This preparation in some strange way lifts the load of oppression and gloom which hangs over these people and imparts life and animation to them. I have very complete records of three cases of this form of affection most happily treated with cascara cordial.

There is a condition which frequently obtains in infants and young children that necessitates a requisition upon the "carminative bottle." I refer to the flatulent distension of indigestion so common at these ages and so annoying to the little ones and their attendants. The domestic medicine chest always contains the weapon that will deal death to this foe of health and comfort, and alas! it is too true that this same weapon may deal death to the suffering one. These "baby mixtures" too often are not safe and should be given with a sparing hand. In cascara cordial we have a safe weapon to meet these troubles. It meets the indications amazing well—relieving the flatulence—producing comfort, and in some as yet unexplained manner, inducing quiet and refreshing slumber. It can be given in large doses with no apprehension of evil results. Upon theoretical grounds I am disposed to think that it would be an effective remedy in some forms of summer complaint in children. Its influence upon the functions of digestion is so unquestioned, its power in restoring normal secretion and correcting morbid action and imparting tonicity to the digestive and alimentary tracts is so decided, that I have no doubt the indications here would be met by its administration. In all of the conditions save the last named one I have had considerable experience with cascara cordial, and have rarely found it disappointing, while I have never been met with that unwelcome salutation: "O, doctor, what an awful medicine you gave me!"

The working formula for cascara cordial can be found in the January number of the Detroit Lancet for the year 1881.

Treatment of Gonorrhœa.

By Dr. Joseph McChesney,* Deming, New Mexico.

HAVING noticed in the Gazette for October, a call for statistics on treatment of gonorrhœa by the corrosive chloride of mercury, I herewith submit a report of a few cases treated by a solution of 1 grain to six ounces of water. The first case, so treated, came under my notice last January, in Wallace, N. M., where I was located as surgeon to the Atchison, Topeka and Santa Fé R. R. Co., and San Pedro Mining Co.:

Jan. 1st, 1883. Mr. Jas. B., teamster to San Pedro Mining Co., presented himself for treatment of gonorrhœa, having had the disease 7 days. He suffered from excessive discharge, thick and creamy, and had considerable pain upon micturition.

He was considerably annoyed, at his misfortune, as he was a married man, and wanted to be cured immediately. Gave him a six ounce solution, containing one grain of corrosive sublimate, to be used as injection, once every four hours. Patient left for mining camp and I did not see him for three days. Upon his return he stated that he was much better, had no pain in passing urine, and very little discharge. Upon the second return trip, he stated that he was entirely well, and in good condition. Six days were thus only required for his cure by this drug.

Second case. Jan. 12th, 1883. A waiter in depot hotel had had gonorrhœa for eight months, which had subsided at time of treatment into a gleety discharge. Examination revealed urethral canal normal size, no stricture. Had been treated with many gonorrhœal injections, but with no benefit. Gave him the corrosive sublimate, one grain to six ounces, and from the first time of using, until completely cured (10 days), he noticed a steady improvement. Had no return of his discharge.

Third case. Jan. 20th, 1883. Mr. John K., saloon-keeper. Had gonorrhœa for one year, had tried everything, till utterly disgusted. Examined him thoroughly for stricture, but found none. Resolving to thoroughly test the efficacy of corrosive sublimate, I determined to try a few of my pet gonorrhœal injections and, if unavailing, to come to the last resource, which had served me so well. For six weeks, I alternately placed him upon injections running thus:

NO. 1.

℞ Morph. sulph., gr. jv
Hydrat. chlor., ʒij
Acid. boracici, sat. sol., ʒj
Aq. camph., ad. ʒjv.

M. Sig. Inject.

NO. 2.

℞ Tr. opii, ʒss
Acid carbol., ♏v
Ext. hydrast. fl., ʒj
Aq. rosarum, ad. ʒjv.

M. Sig. Inject.

*Surgeon Atchison, Topeka & Santa Fé Railroad Co.

NO. 3.

℞ Hydrastin, gr. v
Potas. permang., gr. viij
Acidi tannici, gr. xx
Aq. rosarum, ad ʒ jv.

M. Sig. Inject.

NO. 4.

℞ Ext. ergotæ. fl. ʒ j
Tr. opii, ʒ ss
Acid. gall ci, gr. xx
Aq. camph. ad. ʒ jv.

M. Sig. Inject.

Injection No. 1, seemed to give the greatest satisfaction, and was the longest used. At the expiration of six weeks, the patient getting more and more disgusted, and wishing to cease treatment, I tried the effect of corrosive sublimate. At the end of three days from this treatment, he noticed a decided cessation of the discharge, and in eight days the discharge entirely ceased.

Case 4. Mr. Frank S., brakeman on A. T. & St. F., R. R., Deming, N. M., Sept. 16, 1883, came with acute gonorrhœa. Gave him six ounce solution of water, one grain of corrosive sublimate. In four days there was marked improvement, and in ten days patient had entirely recovered.

Sept. 20, 1883. Mr. Frank F., brakeman on Southern Pacific R. R., acute gonorrhœa, same treatment with cure in eight days.

July 11, 1883. Mr. Wm. K., baggageman on S. P. R. R., acute gonorrhœa, corrosive sublimate treatment and cure in 10 days.

Sept. 21, 1883. Mr. Chas. F., transfer clerk, S. P. R. R. yard. Acute gonorrhœa, corrosive treatment, cure in 10 days.

I would gladly cite more of such cases with like results, but I think these few sufficient. And in the corrosive sublimate treatment for gonorrhœa, I sincerely trust that I have at last met with a drug that gives such entire satisfaction to the unfortunates many, that it will prove a financial boon to me.

Compound Cerebral Sedative.

By T. D. Crothers, M. D.,* Hartford, Conn.

ALL persons who treat inebriates and opium cases, experience more or less difficulty in controlling the complex neuralgias, and hyperæsthetic nerve states, so common when alcohol or opium are withdrawn. Sedatives and narcotics are demanded in nearly all cases, to control nerve irritation and disorder, from a period of from one to six weeks, at the beginning of the treatment; also at intervals later, especially if the case is a periodical inebriate, and to combat special symptoms that appear all through the progress of treatment.

The study of the physician is to find some one of this class that will control the disordered nerve function, without special interference with nutrition or other vital processes.

Every remedy in the materia medica is from time to time tested, and generally the results are unsatisfactory. A drug that under certain conditions will act promptly and efficiently, will be inert in other cases. Various combinations of drugs are tried with the same results, and so the physician is continually on the alert to find some medicine or drug that will meet this condition in these cases. In my experience of many years, I have tested nearly all the drugs known to have sedative qualities, and tried the effect of foods, and baths, in these cases, and yet the results are not satisfactory.

In many cases of inebriety, during the period of treatment there comes a time when a drink paroxysm, or storm, is impending, marked by a state of nerve irritation and hyperæsthesia, and many other symptoms, which, unless controlled by a sedative, will most certainly burst out in inebriety. Like the onset of epilepsy it is seen and can be averted by medicines when properly applied.

A drink storm is gathering, and, unless controlled and scattered, will explode in intoxication and stupor, from either opium or alcohol. If a remedy can be found to buoy the case over forty-eight hours, to diminish this nerve storm which is accumulating in the central stations of the brain and cord, the danger is over, for the present. To accomplish this the remedy must be prompt in its action, and free from entailments of nausea, or complication of digestion or depression after.

Parke, Davis & Co.'s compound cerebral sedative, composed of chloral hydrate, bromide of potassium, gelsemium, and tincture of opium, (the latter I have replaced by hyoscyamus) is the best combination I have used, and approaches more closely to a specific than any other remedy. For a long time all of these remedies have been used alone for this condition, but in this form they seem to possess a greater power, and certainty of action, with less bad results. The opium in cases of opium inebriety can not be used in this formula, but the hyoscyamus is a good substitute, and will be found of equal value.

Experience teaches that chloral is both uncertain and dangerous in these cases, and often instead of quieting the nerve irritation, its first action is to farther stimulate and increase the condition that is sought to be remedied.

The bromide has also many grave objections, and the gelsemium, as well as opium and hyoscyamus are uncertain and changeable in their action.

But in this combination none of these objections have appeared, and although my experience in its use is limited to about forty cases, I feel fully warranted in calling attention to this formula, and urging that it be fully tested by the profession both in hospital and private practice.

I have no doubt that its value will be recognized in many other cases, and in my experience, a formula like this, put up in quantities by some large respectable house gives more satisfactory results than when compounded by the local druggist in quantities to meet the demand. This is not said in the interest of any firm, or house, but is my experience with this and other drugs.

I am now using this cerebral sedative in all cases of nervous irritation, and sleeplessness following the excessive use of alcohol, and also to lessen the extreme neuralgias so common in all these cases. I find it invaluable in averting the return of the paroxysm for drink in many cases. I find small doses often repeated to be the most effectual. In many of these cases its effects are so positive as to create the impression on the patient's mind, that it is a remedy to destroy the craving for drink entirely. In one in-

*Superintendent of Walnut Lodge; Editor of Journal of Inebriety, etc.

stance, a case who had recovered, and gone into business again, the patient felt the returning of the old craving for drink, and traveled a long distance to get this medicine to break up this feeling.

I wish in this note to draw out the experience of other observers with this formula, and thus be the better enabled to judge of its real value in this and other cases.

Normal Liquid Ergot and Jamaica Dogwood in a Case of Fibroid of the Uterus.

By Frank A. Ramsey, M. D., Knoxville, Tenn.

I was called upon two years ago by Mrs. Delia Johnson, colored, æt 35, married. Patient had never been pregnant; menstruated regularly in every particular, except that there was more pain than is ordinary; health generally good. She had been compelled to refrain from all exertion for six months because of an abdominal tumor, first discovered a year and a half before, that had progressively increased, causing corresponding inaptitude for physical exertion, and attention to household duties. She slept but little, and was despondent. The tumor, on examination, extended above the navel, and her abdomen, when she was in any position, had the appearance of a woman in the full term of pregnancy. It was decided that the tumor was a uterine fibroid. The uterus proper was considerably enlarged in neck and body. She was directed to take thirty drops of Jamaica dogwood at intervals of eight and six hours for relief of pain and discomfort and a syringefull of normal liquid ergot was injected at a point on the surface over the tumor. The use of the hypodermic syringe was repeated every forty-eight hours for ten days; the needle was always introduced perpendicularly and to the full extent of its length, the tissues of the abdominal walls being embraced between the thumb and fingers of the left hand. After five administrations the instrument was irregularly employed two and three times a week for a month, and subsequently for three months once each week.

The dogwood was taken every day, once, or twice, she having discerned the impression it made on her, and at her own instance made the dose larger and smaller, according to the length or shortness of intervals, or frequency of repeating the dose of the medicine. This course was daily followed until she left to engage as laundress at Tate's Springs, after seven months of this treatment. Treatment was suspended from the last week of May, until the second week in November, last year. Then irregularly followed, injections being given once and twice a month for a few months when it was again stopped. The Jamaica dogwood, at her own option, was taken perhaps once a week,—sometimes more frequently, and occasionally not so often. This use of Jamaica dogwood has caused none of the thirst of an inebriate, nor the miseries of an opiate slave, nor the habitual resort to an agent to alter the sensations experienced by one in normal health.

It is notable that from the day the treatment of the woman began, there was perceptible, positive release from the incubus of inability, every successive day pressing more and more upon her to leave her bed, and her house, and begin again the discharge of active duties to which she had been accustomed. Upon these she entered within two months, gradually regaining physical, general ability. For a while there was no decrease in the size of the tumor, nor alteration in the appearance of the abdominal enlargement. Within two weeks there was, on palpation, perceptible increase in the hardness of the tumor, as felt through the tissues of the abdominal walls. In the course of several weeks more, the size of the tumor was discovered to have lessened. It afterward certainly decreased, until from apparently completely filling the abdominal cavity, it is now no larger than a thick-rind Florida orange. Pain at menstrual periods is almost absent, except on occasion from tangible cause, and then easily controlled by the dogwood. The enlargement of the womb has also abated.

I have used other preparations of ergot, and hypodermically and successfully, in treating fibroid tumors, but in no instance with as rapid lessening of the mass, as in this one under the administration of Normal Liquid Ergot and Jamaica dogwood.

The circumstances of the above case lead to the question, does Jamaica dogwood make impression adverse to the formation and growth of fibroids; or, does it have an action favoring the retrocession of maturing, or matured fibroids? Or, is it, under definite conditions of the organism, not well recognized as an efficient adjuvant to ergot, in the treatment of fibroid tumors?

Vesication in Diphtheria.

By F. W. Bartlett, M. D., Buffalo, N. Y.

ACKNOWLEDGING with pleasure the receipt of a copy of "Collective Investigation of Diphtheria," I ask a short space in the Gazette to report a case of diphtheria which first induced me to favor vesication in certain cases. It was published ten years ago in the Buffalo Medical and Surgical Journal, but as it seems in the present stage of medical research to have an important bearing upon certain possibilities in treatment, and perhaps a revelation as to the cause of the appearance of the exudate upon the mucous membrane of the pharynx, I present it for the consideration of your readers.

In February 1862 I was called to Black Rock, a suburb of Buffalo, to attend Mr. S. B., for diphtheria. Patient about forty-five years of a age, iron puddler, usually healthy and fair physical development and strength, whom I had known for several years. The exudate covering tonsils; pharynx and posterior nares, as far as could be exposed, was of ashy tint and the constitutional disturbance very profound. On the fourth day of attendance the case had progressed to an apparently hopeless condition and I so informed the patient. He received the opinion calmly, but before I left asked if something could not be done for a severe pain in epigastric region. His cyanotic condition made me fear the effect of opium and I advised that a flannel should be dipped in hot water, wrung and lightly sprinkled with ol. terebinthinæ and then applied over the abdomen.

Mrs. B., after my departure, proceeded to obey instructions, but, by mistake, heated the turpentine, saturated the flannel with it, and so applied. It was borne for a few moments and then flung violently across the room by the patient who said he "would rather die than suffer such agony." Greatly alarmed, his wife covered the inflamed surface with fresh lard and awaited my morning visit.

On entering the house I was cheered by the improved appearance of the patient's countenance, but was speedily informed of the probably fatal mistake. I carefully removed the oiled covering from the abdomen and found a surface exudate fully twelve inches square, corresponding perfectly to that of diphtheria. Inspection of fauces showed marked diminution of the exudate and improved appearance of mucous surface. In two or three days exudate entirely disappeared, the denuded surface of abdomen rapidly healed, and the patient made a prompt and perfect recovery. Upon this accidental success, I based the treatment of laryngeal complications, as stated on page 103 of Collective Investigation of Diphtheria.

Reflections: Do we not often see in diphtheria evidences of almost scarlatinal efflorescence, enough at times to cause temporary difficulty in diagnosis? In scarlatina anginosa how difficult to diagnosticate from diphtheria. My theory is that the germ cause, or materies morbi, is very similar, modified by at present, unknown influences. In cases, particularly of adults, of unusual malignancy, I should be strongly tempted to try a similar plan even if it were necessary to chloroform or etherize the patient. The action of turpentine can easily be managed so as not to expose more than the membrana mucosa leaving the derma intact. While it is true that deep wounds may take on a sloughing condition, it has not been proved that removal of the epidermis will be followed by any such misfortune. By acting upon a large surface we favor speedy elimination, and relieve the engorged, pharyngeal surfaces, as I have said in my article in Collective Investigation of Diphtheria. I believe the exudate in the throat is merely an announcement of the presence of the poison in the blood, and that from the nature of the epithelium or impinging of inspired air primarily upon this surface the partial elimination of the morbid element is accomplished. "One swallow does not make a summer." Such a case as I here report is not sufficient to justify a radical change in the treatment of diphtheria, but if it helps to encourage any one to attempt, when all other means are likely to fail, in an individual of good vital tone, the elimination of the diphtheritic poison by the cutaneous surface, my object in offering it will have been attained.

Iodine in Malarial Fevers.

By G. Volney Dorsey, M. D., Piqua, O.

THE October number of the THERAPEUTIC GAZETTE notices the report of Drs. Atkinson and Woods on this subject, as published in a late number of the American Journal of Medical Sciences. I have not seen the report, but the conclusions, at which, as stated in your paper, these gentlemen have arrived, are so much at variance with my own observations, that I cannot avoid saying a word in defence of iodine as a remedy in malarial fevers, in which they seem disposed to place so little confidence. There may have been some peculiarities, such as are often seen, in the epidemic of 1882, in which these gentlemen made their observations, or in the locality in which it prevailed, that militated against the successful use of iodine; otherwise I can hardly think they could have formed opinions so unfavorable to its remedial powers.

In 1879, in an address on the subject of malarial fevers, delivered before the Northwestern Medical Association of Ohio, at Lima, I took occasion to speak favorably of the use of iodine, which I had then been using freely for two or three years. Since that time I have used the remedy very frequently, in every form of malarial fever, in intermittent, remittent and in typho-malarial fevers, and I can truly say that my confidence in its powers has increased with each year's experience. I have practiced medicine in a malarial country for nearly fifty years, have used all the preparations of Peruvian bark, as well as several other remedies that have had their days of popularity and have passed away, and I can say without hesitation that in iodine I have found a remedy more generally successful than any I have ever tried, quinine alone excepted. And in many cases where quinine has entirely failed, the iodine has been promptly successful. This has been particularly the case in old and obstinate cases of intermittents connected with derangement of the liver and spleen. But I have found very few cases, indeed, of malarial fever of any type in which it was not useful, and instead of having "some slight influence in controlling the paroxysms of intermittent fever," I have seldom seen more than one recurrence of the paroxysm after commencing the remedy, and very frequently there has not been a single one. In cases of typho-malarial fever accompanied with dry and dark tongue, and want of proper secretion, the use of iodine for two or three days has in many cases restored the action of the secretory glands, producing a well-marked reduction of temperature, as shown by the daily use of the thermometer, and certainly hastening convalescence, so far as careful observation seemed to indicate. The tendency to relapses has appeared to me hardly so great as with the various preparations of bark, though I have almost uniformly recommended the use of the iodine to be resumed for two or three days at the end of each period of seven days, for a few weeks after the cure has been effected. This, too, is safe practice in cases where quinine or any preparation of bark is used. I have not observed any disposition to diarrhœa or derangement of the stomach from its use. It is usually as well borne as any other remedy. In a word, while no man, perhaps, would think of abandoning quinine or the other preparations of bark in the general treatment of malaria, still it is true that in iodine we have a valuable adjuvant to these, and one that in very many cases makes a successful or even preferable substitute. Every one meets cases where quinine will fail to produce its desired effect, or where, perhaps, from some idiosyncrasy it is badly borne, and in very many such cases iodine will be found valuable. I would not be considered as advocating its use to the exclusion of other remedies, but I do say that in a very large proportion of cases it is a cheap and valuable substitute, and in many cases where bark preparations fail we find in the iodine precisely the article wanted.

I use the compound tincture in doses for adults of ten or twelve drops in a small wineglassful of sweetened water, given every six or eight hours, as may best suit the case. In ordinary cases of intermittents to be given every six hours until the paroxysm ceases to recur.

Chemical Examination of Boldoa Fragrans.*

By H. W. Korper, Ph. G., San Francisco, California.

THE boldoa fragrans, a tree in the natural order Monimiaceæ, is a native of Chili; it grows to the height of 18 to 20 feet. The leaves, which are the parts used in medicine, are of a broadly oval form, about two inches in length, rough on both sides, the upper surface covered with numerous oil glands containing an aromatic volatile oil; the lower surface is hairy and lighter in color than the upper one. On being chewed the taste is at first cooling, afterwards pungent and slightly bitter.

The analysis, which occupied the greater portion of eight months, was performed with the greatest care and accuracy. Each process being repeated at least four times in order to obtain uniform results.

The process of analysis was as follows: The leaves in the state of a moderately fine powder, were exhausted successively by stronger ether, alcohol, cold and boiling water, and by water acidulated with hydrochloric acid. They were also exhausted by distillation with water.

The leaves contain the following substances:

Boldina (an alkaloid), one-tenth of one per cent.

Aromatic volatile oil, two per cent.

Resin soluble in ether and alcohol.

Resin soluble in alcohol; insoluble in ether.

Fatty matter, five per cent.

Gum, citric acid, tannic acid, albumen, chlorophyll, wax, sugar, oxalate of calcium.

Ash, ten per cent.

Soluble matter.....67½ per cent.

Insoluble matter.....32½ per cent.

Total.....100 per cent.

The alkaloid boldina may be obtained in two ways: by exhaustion with ether and by exhaustion with acidulated water. It is soluble in ether, alcohol, chloroform; almost insoluble in water, to which it imparts a bitter taste. It is in the form of white scales.

A solution in acidulated water gives the following reactions:

Aqua ammonia precipitates the alkaloid which is soluble in an excess of the alkali.

Liquor potassa gives a precipitate soluble in an excess.

Solution iodine in iodide potassium gives a precipitate of a red-brown color, insoluble in water, but soluble in diluted acetic acid.

Solution iodohydrargyrate-potassa gives a light yellow precipitate.

Sulphuric acid gives a blood-red color to the solution.

The acid when dropped upon the alkaloid gives a dark-colored mass.

Boiled for a few minutes with a dilute acid, then tested with Fehling's solution, no precipitate is formed; no glucoside.

The process by which I procured the alkaloid was to exhaust the drug by boiling with a three-per-cent. solution of acetic acid, filter, removing coloring matter by aid of ether, neutralize with bicarbonate of soda, remove alkaloid by agitating with ether, ether allowed to evaporate spontaneously, dissolved residue in diluted acetic acid, filtered, precipitated with ammonia, redissolved in diluted acetic acid, filtered again, precipitated, continued until the alkaloid was almost pure. Dried away from light and air under a blue glass shade.

Volatile oil is of a light yellow color, very fragrant, soluble in alcohol, ether, slightly soluble in water, to which it imparts a slight taste and odor. May be obtained in two ways: distillation with water and by exhausting leaves with ether. The yield is about two per cent.

Ether dissolves boldina, volatile oil, wax, one resin, chlorophyll, fat.

Alcohol dissolves boldina, volatile oil, sugar, citric acid, chlorophyll and two resins.

Cold water dissolves citric acid, tannic acid, sugar, gum.

Boiling water dissolves citric and tannic acids, gum, sugar, albumen.

Water acidulated, boldina, oxalate calcium, etc.

* Extract from Inaugural Essay presented to the California College of Pharmacy.

The Hyposulphite of Soda.

By D. P. Duncan, M. D., Waynesboro, Ga.

FOURTEEN years since I culled from some journal the information that the above salt had been successfully used in the treatment of chills and fever, prevalent in our southern country. I then bought a pound and kept it for three years without opening the container.

In those three years I am unable to say how many ounces of sulphate quinine I used; but upon one occasion I happened to get out of quinine and was *nolens volens*, driven to the soda salt as a substitute. It succeeded admirably and since then I have found upon close and extensive observation that it is peculiarly adapted to those cases where quinine fails to effect a cure.

In therapeutics we unfortunately have to be governed by a kind of empiricism in obtaining correct ideas as to the action of medicine. But in using the hyposulphite of soda for chills I found by experience that frequently worms, in great numbers, were expelled, and hence have been using this salt as a vermifuge for the lumbricoides internally, and by enema for the "Oxyuris Vermicularis." I give it for an adult in 15 gr. doses three times daily until it begins to act too freely, and then diminish either the dose, or give it less frequently in the same doses. Children in proportion to their ages.

Since having discovered its action in the above it has come to light, that hyposulphite of soda is useful also in diphtheria, both by way of treatment and as a prophylactic. The late Dr. Harris, of Greensboro, Ga., had previous to his death many cases of diphtheria to treat, and whenever the disease made its appearance in a community he began giving this salt in small doses in families which did not have it and found that they were perfectly exempted from its ravages. I believe it possesses this prophylactic power, and were my section to become the seat of the disease I should depend upon it without the slightest apprehension of disappointment.

Again I have found a saturated solution of this salt efficacious in the treatment of inflammations produced by the contact of the skin with poison oak or ivy, and in one case of itch it proved a reliable agent in destroying the parasite. It is undoubtedly a para-

siticide of great power and, of course, is applicable to all those diseases dependent upon parasites.

I hope others may be encouraged to use this salt, feeling that they will be delighted with an agent at once so cheap and so successful, especially in those cases of chills which have resisted quinine treatment.

Dry Earth Dressings.

By Wm. Bigham, M. D., Seville, Ohio.

MY attention was called to the "dry earth dressing" by the reference to its use in a case of epithelioma, on page 419 in the October number of The Therapeutic Gazette. I had a case on hand on which I determined to use the dressing.

Valentine Hyett, æt. 82 years; farmer; health good until recently; is now a subject of Bright's disease. On the 25th of October, anasarca of the limbs was extremely great. A small sore with indurated edges made its appearance on the left leg below the knee. The dropsical effusion escaped rapidly through this opening in the cuticle, the part became violently inflamed, in a few days. The redness assumed a dusky hue, and the temperature gradually sank. The tissue immediately around this spot became black, and the odor very offensive. Poultices of yeast and charcoal were constantly applied. The gangrene continued to spread and increase rapidly.

On November 5th, I ordered a clay dressing combined with sugar, and enveloped the entire limb below the knee to the ankle with it, covering it with cotton and a bandage. The dressings were directed to be changed morning and evening.

November 7th, forty-eight hours after the first dressing, I removed the entire mass of dead flesh. I then washed out the wound and continued the dressing.

November 12th, the appearance of the limb is greatly improved, and the inflammatory appearance has subsided to a great extent. There is no appearance of gangrene and the offensive odor is entirely absent.

The clay used was what is known as "blue clay," taken from a well recently dug.

Hospital Reports on New Remedies.

From Charity Hospital, New York City.

Cheken.

By W. S. Gottheil, M. D., New York.*

SOPHIA Hewitt, æt. 35, Irish, housekeeper; admitted Jan. 17, 1883. Has suffered for three months from pleurisy of the left side. Examination shows a moderate amount of fluid. Ordered general constitutional treatment, and blisters to side.

Jan. 24. Considerable pain in side. Cough but little better. Ordered:

℞ Fl. ext. cheken, ʒ ij t. d.

Jan. 27. Cough very much better. Still has some pain in side. Discharged.

John Ketcham, æt. 34, U. S., single, hostler; admitted Dec. 11, 1882. Patient has phthisis, second stage, high temperature, night sweats, diarrhœa, etc.

Treatment was symptomatic, and fairly successful. By Jan. 1883, his temperature was only 1° or so above normal in the afternoon. Sweats had ceased, and his condition was fair. Cough was bad, however, especially at night.

Ordered for this, Jan. 19:

℞ Fl. ext. yerba santa, ʒ i t. d.

Jan. 26. Medicine has helped his cough to a moderate extent, undoubtedly.

Yerba changed to:

℞ Fl. ext. cheken, ʒ ij t. d.

Jan. 30. No special effect on cough from cheken.

Feb. 6. Cough worse since yerba santa was stopped. Put on yerba ʒ ss t. d. again.

Feb. 8. Good effects again. Has not coughed nearly so much. Easier at night.

Feb 9. Cough bad again to-day:

℞ Fl. ext. yerba santa, ʒ j, t. d.

Feb. 13. Moderate results from yerba santa. Stopped. Patient put on oil and iron.

Feb. 26. Cough very bad. Stopped all other medicine and again gave:

℞ Fl. ext. cheken, ʒ j t. d.

Feb. 28. Not much change from medicine.

℞ Fl. ext. cheken, ʒ ij t. d.

March 2. Cough not improved at all. Feels all stuffed up in chest.

℞ Fl. ext. cheken, ʒ ss t. d.

March 4. Cheken of no use; thinks he did better on oil and iron. Complains of headache each time after taking cheken, which was now stopped.

March 13. Put on:

℞ Fl. ext. yerba santa, gtt. xxv, t. d.

March 14. Cough and dyspnœa just the same. Increased to:

℞ Fl. ext. yerba santa, gtt. xxx, t. d.

March 15. Cough no better.

℞ Fl. ext. yerba santa, ʒ j, t. d.

March 16. Yerba santa nauseates him. Stopped it and ordered fl. ext. quebracho, ʒ j t. d., for his dyspnœa.

March 20. Dyspnœa slightly better.

℞ Fl. ext. quebracho, ʒ ij t. d.

March 23. Shortness of breath undoubtedly better.

March 29. Doing well on quebracho, and Stokes' expectorant.

Ada Barnum, æt. 23, U. S., single, domestic. Admitted Jan. 18, 1883. Phthisis, second stage. Slight increase of temperature, night sweats, etc. Besides general treatment, was ordered, fl. ext. yerba santa, ʒ j t. d., for cough, which was very distressing.

Jan. 22. Feels somewhat better.

Jan. 23. Thinks the medicine has done her cough some good.

Jan. 27. Yerba does not give much relief. Changed to:

℞ Fl. ext. cheken, ʒ ij t. d.

Jan. 28. Is sure the medicine does her cough good.

Jan. 29. Doing very nicely. Continued cheken.

Feb. 3. Supply of cheken ended. Fair results.

*House Physician Second Medical Division Charity Hospital, New York.

Feb. 26. Put on fluid extract cheken 3 j t. d., for cough which had gotten bad again.

Feb. 28. Cough better, can raise phlegm more easily. Increased cheken to 3 ij t. d.

March 5. Improvement still continues. Moderately good results from cheken.

Joseph Treathoff, æt. 33, single, German, machinist. Admitted Jan. 23, 1883. Patient gives a history of phthisis extending 8 months back. Examination reveals phthisical process in both lungs, advanced to excavation on the right side.

Jan. 26. Cough very bad. Ordered:

℞ Fl. ext. cheken, 3 ij t. d.

Jan. 29. Cough but little better.

Jan. 30. Supply of cheken exhausted. No effect on cough. Ordered treatment resumed.

Feb. 7. Put on fluid extract yerba santa for cough.

Feb. 8. Cough somewhat easier. Slept well. Continue treatment. No fever.

Feb. 9. Cough still improving.

Feb. 10. Cough bad again. Medicine has lost all effect. Stopped.

Feb. 28. Put on cheken again for his cough, 3 j t. d.

March 1. Does not know that cheken is helping him at all. Coughs a good deal.

March 2. Cough very bad, hard and dry. Increased cheken to 3 ij t. d.

March 3. Cheken having proved a failure it was stopped and usual treatment resumed.

Lawrence Sullivan, æt. 43, Irish, widower, painter. Admitted Feb. 3, 1883. Patient is suffering from phthisis, third stage, cavity at right apex, chief symptom is the hacking cough.

℞ Fl. ext. yerba santa, ʒ ss t. d.

Feb. 8. Coughed much last night, though he thinks the medicine softened the cough somewhat. Wants to continue yerba santa, which was increased to 3 j t. d.

Feb. 9. Cough somewhat softer, but that is all. It is still very annoying. No fever.

Feb. 13. Same.

Feb. 16. Yerba santa stopped; no result.

Feb 27. Feels pretty weak. Cough bad. Ordered stimulants and fluid extract cheken, 3 j t. d.

Feb. 28. Cough getting better. Ordered cheken, 3 ij t. d.

March 3. Cough looser and much better. Continued treatment.

March 3. Improvement continues.

March 5. Moderate result from cheken. Does not think, however, that is does as well as oil and iron did. Cheken stopped.

March 13. Cough moderate. Ordered:

℞ Fl. ext. yerba santa, gtt. xxv t. d.

March 14. Cough improving, but it had been getting better before he was put on yerba santa, which was continued in 30-drop doses t. d.

March 15. Coughs less, and more easily. Increased yerba santa, to 3 j, t. d.

March 26. Yerba santa makes him vomit. Stopped. Resumed ordinary treatment.

Robert Murphy, æt. 46, Irish, shirt cutter. Admitted Feb. 19, 1883. Patient gives a history of old phthisis; examination shows the process advanced to the second stage.

Treatment: Ol. morrhuæ and maltine, and dil. acid hydrochl., gtt. x, before meals.

Feb. 27. Coughs much, especially at night:

℞ Fl. ext. cheken, 3 j t. d.

Gave HCl. in addition but stopped all else.

Feb. 28. Coughed less last night, and slept better. Thinks the medicine good. Increased cheken to 3 ij t. d.

March 2. Cough bad again. Coughed up two large clots of blood this morning.

℞ Fl. ext. cheken, ʒ ss t. d.

March 5. Cough as bad as ever. Cheken stopped.

March 13. Put on yerba santa, gtt. xxv t. d. for his cough.

March 16. Cough a little better, but yerba santa makes him sick. Stopped, and ordinary treatment resumed.

Frank Walsh, æt. 30, Irish, mason. Admitted October 4, 1882. Case of phthisis, third stage, especially marked by a troublesome gastric complication. Treatment presented nothing special until

Feb. 26. Fluid extract cheken, 3 j, t. d., was ordered for his cough. Stopped sol. Fowleri, which he had been taking for his vomiting.

Feb. 27. Thinks cheken eases his cough somewhat. Ordered it increased to 3 ij t. d.

Mar. 1. Cough loose; cheken doing good.

Mar. 2. Temperature rose again last night. Feels bad to-day; cough as bad as ever.

℞ Fl. ext. cheken, ʒ ss, t. d.

Mar. 3. Cheken also nauseated him. Stopped it.

Mar. 14. Put on yerba santa, gtt. xxv, t. d., for his cough.

Mar. 15. Vomited yerba santa. Stopped it and put on ordinary treatment.

Julian Frank, æt. 43, German, cook, single. Admitted December 26, 1882. Is suffering from chronic Bright's disease and chronic bronchitis. Gives a history of Bright's disease extending back six months or more. At the time of his admission the amount of urine he was passing varied from 14 to 18 ounces a day. He suffered from continual headache. His complexion was yellow and his feet slightly swollen. He coughed a good deal and raised considerable muco-purulent sputa. Examination revealed nothing in the lungs but the evidences of chronic bronchitis. He was treated in various ways for some time, but without any marked result. The daily amount of urine remained low and he continued to suffer from the effects of retention in the blood of the products of disintegration. He had taken the ordinary cough medicines without much result.

Mar. 2. Feels feverish toward nightfall. Cough pretty bad.

℞ Fl. ext. cheken, 3 j, t. d.

Mar. 4. Says the cough medicine makes him cough more than ever, and also makes him sick at his stomach.

Mar. 5. Vomited cheken which was stopped.

Mar. 13. Cough very dry and hard. Ordered fluid extract yerba santa, gtt. xxv, t. d.

Mar. 20. Cough slightly better; no decided result. Remaining history unimportant.

John H. Bray, æt. 38, Irish, plumber. Admitted December 12, 1882. Phthisis, second stage. Patient was kept under ordinary treatment for a time.

Feb. 26. Cough very hard and dry, especially at night. Pulse 90.

℞ Fl. ext. cheken, ʒ j, t. d.

Mar. 1. Cough better. Medicine does good, he is sure. Coughed but little last night.

Mar. 2. Cough decidedly softer. Thinks this by far the best cough medicine he has ever had.

Mar. 4. Still doing very nicely.

Mar. 5. Supply of cheken has given out. Ordered hospital cough mixture. His cough soon became very bad again.

Mar. 12. Feels very sick. Constant headache from the terrible cough.

℞ Fl. ext. yerba santa, gtt. xv, t. d.

Mar. 13. Cough never so bad. Increased yerba santa to gtt. xxv.

Mar. 14. Same. Yerba santa increased to ʒ j, t. d.

Mar. 15. Cough better. Decidedly more easy than it has been for several days.

Following treatment was of ordinary kind.

Maurice Spillane, æt. 47, Irish, blacksmith. Admitted November 22, 1882. Patient gives a history of chronic phthisis extending back for five years. On admission we find abundant evidences of phthisis, second stage, both physical and rational. All his symptoms improved rapidly under treatment, but a harassing cough remained.

Jan. 22. Cough very bad.

℞ Fl. ext. lippia Mexicana, gtt. xxx, t. d.

Jan. 25. Feels considerably better; is sure that the drops do his cough good.

Jan. 29. Cough slightly worse again.

℞ Fl. ext. lippia Mexicana, gtt. xl, t. d.

Feb. 1. Doing very well; coughs but little.

Feb. 5. Doing splendidly as regards his chest symptoms. Pain and cough easier. From Feb. 5 to 26 nothing special.

Feb. 26. Cough getting very bad again. Ordered fluid extract cheken, ʒ j, t. d., and general treatment.

Feb. 28. Cough same; no better. Increased cheken to ʒ ij, t. d.

Mar. 1. Spits up much. Thinks the medicine loosens his cough. Increased to ℥ ss, t. d.

Mar. 2. Cough soft. Coughed very little last night. Continue treatment.

Mar. 4. Cough has become very severe again. Thinks the medicine is "too strong." Cheken reduced to ʒ ij, t. d.

Mar. 5. No better. Bowels loose from cheken, which is stopped.

Mar. 12. Cough so severe as to prevent his sleeping at night. Ordered fluid extract yerba santa gtt. xv, t. d.

Mar. 13. About the same. Expectorates more easily. Increased yerba santa to gtt. xxv.

Mar. 14. Cough unimproved. Increased yerba santa to ʒ j, t. d.

Mar. 15. Nauseated by yerba santa. No improvement in symptoms. Yerba santa stopped.

John J. Fisher, æt. 35, U. S., driver. Admitted February 20, 1883. Patient gives the ordinary phthisical history, commencing with a pneumonia last winter. Examination shows almost complete consolidation of the right lung, but as yet no signs of cavity. Has had both hæmorrhages and night sweats. Slight looseness of the bowels. Ordered general treatment, and for his cough

℞ Fl. ext. cheken, ʒ j, t. d.

Feb. 28. Cough no better. Night sweats again. Ordered night sweat pill; cheken ʒ ij, t. d.

Mar. 1. Cough no better; can't sleep at night for it. Cheken increased to ℥ ss, t. d.

Mar. 2. Cough just as bad as ever. Medicine has had no effect at all. Has had a headache every afternoon since taking cheken.

Mar. 4. Never coughed so much as he did last night.

Mar. 5. Cough worse than ever. Medicine is certainly a failure. Stopped it.

Mar. 6. Ordered yerba santa ʒ j, t. d., for cough.

Mar. 10. Cough unimproved.

Mar. 15. Coughed less and slept fairly last night. Treatment continued.

Mar. 19. Cough is steadily getting worse instead of better, and medicine upsets his stomach. Stopped it.

Thenceforward treatment was of the ordinary kind.

Christian Riedal, æt, 36, German, married, admitted Feb. 5, 1883. Is in advanced stage of phthisis, with cavities at both apices. General condition very bad; had several inconsiderable attacks of hæmoptysis during the first weeks of his stay in the hospital. These and his other most distressing symptoms gradually subsided under appropriate treatment.

Feb. 26. Pulse 86; respiration 30; temperature 98 4-5°; coughs very much, especially at night.

℞ Fl. ext. cheken ʒ j, t. d.

Stopped all other treatment.

Feb. 28. Coughs less, undoubtedly. Says that he wants to cough, "but the medicine won't let him." Slight diarrhœa.

Mar. 2. Diarrhœa better. Coughs badly again. Sputa slightly bloodstained.

℞ Fl. ext. cheken ℥ ss t. d.

Mar. 3. Cough slightly better. Still some blood in expectoration.

Mar. 5. Undcubted improvement in cough. Slept well last night.

From Mar. 5 to 11, he was put on the ordinary expectorants.

Mar. 12. Cough very severe again, troubles him night and day. All treatment stopped, save:

℞ Fl. ext. yerba santa, gtt. xv t. d.

Mar. 13. Some blood in sputum again. Cough unimproved.

℞ Fl. ext. yerba santa gtt. xxv t. d.

et

℞ Fl. ext. ergot ʒ j every 4 hours.

Mar. 15. Complains of feeling of nausea. Ordered bismuth subnit, gr. xx, t. d., and milk and lime-water diet. Cough unimproved. No blood in sputa.

Mar. 16. Yerba santa makes patient vomit. Stopped, and ordered mist. glycyrrh. co.

Mary Deguse, æt. 30, U. S., widow, domestic. Admitted Sept. 14, 1882. Patient had pneumonia three years ago. Since then has suffered from phthisis, the symptoms and physical signs of which, advanced to the third stage, and marked. On Jan. 9, for the relief of her cough and distress, she was put on eucalyptol, gtt. v. t. d.

Jan. 11. Eucalyptol changed to gtt. xx. at night when most of her coughing fits occur.

Jan. 13. Thinks she has not coughed quite so much for the past two nights as before.

Jan. 16. Eucalyptol, gtt. xxx at night. Cough bad again.

Jan. 24. Cough and distress in chest unimproved. Expectoration unaffected. Eucalyptol stopped. Ordered fl. ext. quebracho, ʒ j. t. d.

Jan. 29. Dyspnœa not much improved. Passed a restless night.

Feb. 5. Breathing slightly better. Very moderate result from quebracho. Stopped.

Feb. 10 to 14. Put on eucalyptol again, gtt. xxx t. d. No result.

Feb. 26. Put on cheken, ʒ j. t. d., for cough, which is very distressing. General treatment also ordered.

Feb. 22. Patient says she noticed an immediate improvement in cough after cheken. Feels and looks better.

Feb. 28. Cough very nice and easy. The patient was continued on cheken till March 8, with excellent result. Then ordinary treatment was resumed.

William J. Barrett, æt. 40, Irish, single, brakeman, admitted Oct. 23, 1882. Patient has suffered from his chest ever since he had an attack of pleurisy, four years ago. He enters hospital with evidences of the remains of a right side pleurisy and a small amount of consolidation of both apices. General condition good.

Feb. 25, 1883. Ordered fl. ext. cheken, ʒ j, t. d., for cough.

Feb. 28. Noticed that he coughed and raised less this A. M. Cheken increased to ʒ ii, t. d.

Mar. 1. No change in cough. Cheken ʒ ss, t. d.

Mar. 2. Cough loosened a little and somewhat better.

Mar. 3. Thinks cheken is doing him good. Coughs much less in the morning; expectorates more easily.

Mar. 5. Cough undoubtedly much improved, looser and easier. Besides this he is naturally of a very costive habit and constantly needs aperients, but since he has been taking cheken he has had a natural movement every day. Remaining treatment unimportant.

William Moran, æt. 46, U. S., married, boiler-maker, admitted Jan. 5. 1883. Patient gives history of phthisis, and examination reveals consolidation at both apices. He was treated symptomatically for some time with varying result, and on Feb. 26, he was ordered fl. ext. cheken ʒ j, t. d., for the harrassing cough. Two days later the dose of the drug was increased to ʒ ii, t. d., but without any marked result. On Mar. 1, he was discharged for insubordination.

Alexander Lynett, æt. 26, U. S., brass-finisher, admitted Feb. 20, 1883. Patient gives a history that points to the occurrence of an attack of acute pneumonia beginning on New Year's day, for which he was treated in Bellevue Hospital. On admission he has the symptoms and signs of tubercular disease at both apices. General condition, however, is moderately good; there is no fever. The chief thing that troubles him at this moment is a terrible cough, which keeps not only himself, but the other men who sleep near in the ward, awake:

℞ Fl. ext. cheken, ʒ j, t. d.

Feb. 28. Considerable pain in chest. Cough unimproved, in fact the medicine sets him coughing, he says. Slight febrile movement (100°) and some night sweats. Cheken increased to ʒ ii t. d.

Mar. 1. Cough no better. Temperature 99½°. Cheken again increased to ʒ ss, t. d.

Mar. 3. Cough unimproved. Much pain in chest.

Mar. 5. No impression made on cough by cheken, which was ordered stopped and mist. glycyrrh. given. Treatment thenceforward presented nothing of interest.

Quebracho.

Susan Kenney, æt. 25, Irish, single, domestic. Admitted Dec. 28, 1882. Patient is suffering from phthisis third stage, and also from an insufficiency of the mitral valve. General condition, notwithstanding fair.

Jan. 10. Complains of great smothering at night, so that she can't sleep. Night sweats are better now. Cough bad:

℞ Eucalyptol (Merck's) gtt. x, at night.

Jan. 17. Smothering and cough improved. Vomits the drops. Eucalyptol stopped. No result.

Jan. 20. Very much smothered, and very sore in chest. Dyspeptic symptoms prominent. Put on pepsin and acid hydrochloric. Given also:

℞ Fl. ext. yerba santa, ʒ ss t. d.

Jan. 11. Cough, she says, is much better, but smothering is unimproved; night sweats have begun again. Gave a night-sweat pill and

℞ Fl. ext. quebracho, ʒ j t. d.

Jan. 27. Don't think the medicine has had much effect, either on her cough or on her smothering. Increased quebracho to ʒ ij t. d.

Feb. 10. Both cough and breathing are better, though at spells she is very short of breath, and suffers from palpitation. Moderately good result from quebracho.

March 1. Put on yerba santa ʒ i t. d., for cough.

March 3. Feels considerably easier, she says, since taking last medicine. Coughs less often and more easily. Increased yerba santa to ʒ ij t. d.

March 5. Cough very easy, but suffers from dyspnœa. Yerba santa again increased to ʒ ss t. d.

March 7. Improvement continues. Stop yerba santa.

March 10. Patient misses yerba santa; she has been taking Stokes' expectorant and oil and maltine.

March 14. Put back on yerba santa ʒ ss t. d.

March 23. Cough about same. Yerba santa, ʒ i t. d.

March 29. Cough better, continue treatment. Here I lost sight of the patient.

Dora Sherry, æt. 65, Irish, domestic. Admitted Jan. 9, 1883. Patient has suffered form Bright's disease for two years past, and enters complaining of moderate œdema of the feet, considerable headache and some dyspnœa. No cardiac lesion found. Treatment presented nothing special until Jan. 24, when the swellings and headache having almost entirely disappeared, she complained very much of dyspnœa, especially at night.

℞ Fl. ext. quebracho, ʒ ss t. d.

Jan. 27. Condition same. Continued medicine and gave also diuretic.

Jan. 31. Breathing easier. Continue treatment.

Feb. 10. Dyspnœa very much relieved. Discharged, much improved, Feb. 25.

Kate McGuire, æt. 26, Irish, domestic, single. Admitted Dec. 27, 1882. Patient gives a history of phthisis, which commenced last winter. Examination shows consolidation of both lungs, advanced on right side to the formation of cavities.

The treatment consisted of oil, iron and other tonics, diet, rest, etc.

Jan. 10. Feels much better and stronger, only her cough troubles her, especially at night. All other treatment was stopped and she was put on eucalyptol (Merck's), gtt. x at night.

Jan. 13. No improvement. Sleeps badly at night on account of cough.

Jan. 15. Gave eucalyptol, gtt. xv, at night.

Jan. 17. Coughs somewhat less; thinks the medicine does her some good.

Jan. 20. Cough undoubtedly better, but still suffers a good deal from smothering.

℞ Eucalyptol, gtt. xx t. d.

Jan. 24. Expectorates easily and sleeps better, but complains much of smothering and shortness of breath. Eucalyptol stopped.

℞ Fl. ext. quebracho, ʒss t. d.

Jan. 27. Some improvement. Continued treatment.

Jan. 31. Feels much more comfortable.

℞ Fl. ext. quebracho, ʒj t. d.

The improvement in symptoms under quebracho remained till Feb. 10, when the supply of quebracho having run out, special treatment was stopped.

Alice Hart, æt. 40, Irish, domestic. Admitted Feb. 9, 1883. Patient has suffered for some time past from asthma and bronchitis, and on admission the signs of chronic bronchitis were found present to a marked degree. All her other organs were in fair condition. She was treated in various ways for some time, but complained much of shortness of breath, and especially of "smothering." Cough also was quite distressing.

Feb. 24. Ordered fl. ext. quebracho ʒj t. d., for the relief of these symptoms.

Feb. 28. Breathing undoubtedly better; less smothering. Has obtained considerable relief from the drug. Continue treatment.

March 3. Improvement continues. Breathes much more freely.

She was discharged much improved on March 14.

George Banks. Patient is suffering from phthisis, third stage. Has been sick from it for 9 months past. On admission, almost aphonic, no fever, no sweats at present. His principal trouble seems to be the dyspnœa Besides general treatment, he was put on:

℞ Fl. ext. quebracho, ʒj t. d.

March 14. Thinks his breathing is a little easier. Cough slightly better.

March 15. Considerable dyspnœa. Ordered quebracho, ʒij t. d. Sweated badly last night. Ordered night-sweat pill and acid spongings.

March 19. Dyspnœa somewhat better. Diarrhœa has set in. Ordered:

℞ Pulv. bismuth, gr. xv t. d.

March 22. Feels weak. Dyspnœa but little better. Quebracho stopped.

Reports on New Remedies.

From Private Practice.

Manaca, Lippia Mexicana.

By T. D. Moore, M. D., Victoria, Texas.

MANACA. My first experience with manaca was in the case of an old frontiersman, who, as an old rheumatic, had been exposed, as a ranger, to the rigors of mountain camp-life during the winter. When he consulted me he frankly told me he had lost confidence in medicines, as he had tried them all without benefit. Having noticed numerous favorable reports on the action of manaca, I persuaded him to give the drug a fair trial. He was then barely able to walk and every joint in his body was sore and stiff, and painful upon the least motion, and his nights were sleepless and painful. I prescribed for him fluid extract manaca (P., D. & Co.'s) in eight-drop doses three times daily, comfortable quarters and an antiphlogistic regimen. In a few days he experienced much relief. After taking the remedy about two weeks the soreness and stiffness in his joints were relieved and he walked about freely without pain, save early in the morning when he complained of some stiffness. He continued taking the prescription for about one month, steadily improving till he was cured and resumed his occupation. He has not been troubled since. I have, since this experience, never written a prescription for rheumatism into which manaca has entered as the base, and results have justified this treatment

I am aware that some writers mentioning manaca and its effects, admit that it speedily relieves rheumatism, but that as soon as the remedy is withdrawn the case relapses to its former condition. According to my experience such observation is incorrect. I have observed that even in cases which have undergone only partial treatment, the relief afforded by manaca has by no means been but temporary.

Manaca is also a very valuable adjuvant in rheumatism co-existing with gonorrhœa and syphilis. In acute articular rheumatism a powerful alterative is demanded which, is at once prompt and curative and I assert, after trial, that manaca stands at the head of the list of such alteratives. Whether it has any specific action over the peculiar cause of this disease the observation of the general practitioner cannot of course, determine.

Lippia Mexicana.—In old coughs, and in chronic bronchitis I believe the profession has in this drug both a reliable stimulant and alterative expectorant. Its influence over catarrhal mucous membranes has been simply wonderful in my hands, and under its use in hacking, dry coughs expectoration becomes quite profuse and relief correspondingly promptly afforded. I have combined it with the iodide of potash and also in several cases with the bromide of ammonium merely to test the virtue of lippia Mexicana as an alterative with the latter for its supposed action on the mucous membrane, but have obtained no better results than when I gave the lippia Mexicana uncombined. I am confident that most cases of chronic bronchitis will be readily benefited by this remedy given in from a half to one teaspoonful doses every two or three hours, according to the urgency of the case. I have not tested this drug in acute bronchitis, but that *it*

will prove valuable here I have no doubt, combined, of course, with other remedies to meet other symptoms than those which may be relieved by an expectorant.

The want of a good expectorant is quite supplied in the lippia Mexicana, given alone or combined as conditions might suggest. The first case I had occasion to give this remedy in, was to a young Spaniard, who contracted a violent cough by sleeping out of doors one night after a ball in January, with his clothing wet with perspiration from dancing. I saw him in May, and prescribed for him the lippia Mexicana in teaspoonful doses every three or four hours. In less than one week his cough had entirely disappeared, relief being promptly afforded. The patient afterward informed me that a male relative of his who contracted a cough about the same time had the same prescription duplicated, and he also was promptly cured. I have since then given this remedy as a base in cough mixtures, and its action has been very satisfactory. I think it stands at the head of expectorants, and is destined to hold high rank in popular favor when its virtues are fully canvassed.

Berberis Aquifolium, Kava Kava, Cascara Amarga, Rhus Aromatica, Oleate of Copper.

By J. C. Spiegel, M. D., Schenectady, N. Y.

IN old lingering cases of general weakness, loss of appetite, lack of ambition, etc., where the patient is despondent and utterly tired of living, I employ the following with good effect:

℞ Berberis aquifol., ʒ iv.
Kava kava, ʒ iij.
Glycerine, ʒ ij.
Water, q. s., ad., ℥ iv.

M. Sig. Teaspoonful a half hour before meals and at bed time in a little water.

In a week or ten days the patient will usually say that life is worth a little more to him, and in a short time a cure is reported.

In leucorrhœa I give:

℞ Cascara amarga, ʒ vj.
Berberis aquifol.,
Kava kava, ♏ ʒ iv.
Syrup tolu, q. s., ft., ℥ iv.

M. Sig. Teaspoonful every four hours in a tablespoonful of water.

This is about the best combination I know of, and has cured several cases of long standing. Should the bowels be costive I add cascara sagrada, ʒ iv. to the above with good results.

I still use rhus aromatica in all cases of incontinence of urine in children, combined as follows:

℞ Fl. ext. rhus aromat., ʒ vj.
Fl. ext. ergot, ʒ iv.
Tr. nux vom., ʒ ss.
Syrup tolu, q. s., ℥ iv.

M. Sig. A half teaspoonful to a child two years old every 6 hours. For a child of four or five, I give one teaspoonful every six hours and two at bed time, one hour apart.

In constitutional syphilis I use:

℞ Fl. ext. cascara amarga,
Fl. ext. berberis aquifol., ♏ ʒ j.
Fl. ext. xanthoxylon, ʒ iv.
Syrup tolu, ℥ jss.

M. Sig. Teaspoonful before each meal and at bedtime.

I have been using oleate copper of late with a lot of Italians working on the West Shore Railroad, suffering from eczema of the arms. They were good test cases, being all so dirty that a good rain storm makes no impression on them. Combined with cosmoline the copper (20 per cent.) cured them all in a short time, besides loosening up some of Italy's sunny soil.

Jamaica Dogwood in Hysteria.

By H. K. Wells, M. D., Erie, Ill.

I SUBMIT a report of a case as written in my case-book; if of any value you may use it:

Oct. 2d, 1883. Mrs. M. G., æt. 44, multipara, married at 14 years of age, and before her menses were established. Has had no child for four or five years past, during which period menses have been somewhat irregular. At this date is confined to her bed; thinks she could not sit up at all; says she has heart disease, and complains of neuralgia. She cannot suffer the least pressure to be made on any part of the body; has no desire for food though she eats some. Flesh soft, flabby, pale. Has sudden fainting, requiring stimulants and friction. Fears death may occur during the syncope. Has tenderness in the region of the uterus and ovaries.

Diagnosis: Hysterical mania.

Dr. T. had treated this patient about a year, and she has had occasional visits from other physicians, with no improvement, but rather an increase of trouble. I had just received a small supply of fluid extract piscidia erythrina (P., D. & Co.), and thought that as all other treatment had failed, this would be a good case to test it in. Prescribed fluid ext. piscidia erythrina, ʒ j, in syrup at bed time. This to be repeated every 4 hours until quietude and sleep ensue. Two doses only were given that night. During the day:

℞ Bromide of potassium,
Chlorate of potassium, ♏ grs. iij
Water, q. s.

M. Sig. Take every three or four hours. Gave cathartics when needed. Also:

℞ Bis. subnit., grs. v
Lactated pepsine, grs. ij.

M. Sig. Take after meals, however slight.

(I should have stated that the pulse was small, hard, quick [about 100], and somewhat irregular. Temperature slightly elevated; tongue, red at tip and edges, dorsum brownish and rather dry.)

Oct 5. Second visit. Patient more quiet. Had slept pretty well nights. Complained less of pain. Appetite improved. Tongue nearly normal in appearance; pulse better; no fainting; cheerful and thinks she could get up. Bowels constipated, for which ordered cathartics, and continued treatment as before except bismuth and lactated pepsine, as there was no more complaint about the stomach.

Oct. 7. Patient's husband called at my office and said patient was doing well, and if she needed anything more he would call in Dr. T., as he had treated her a long time, and only charged him one dollar per visit, while I charged three.

Two or three weeks afterwards saw Mr. G. again. Said his wife was doing some house-work and getting along well. Had not called Dr. T. or any other doctor.

Quebracho in Pneumonia.

By H. H. Baker, M. D., Painesville, Ohio.

TWO cases in which I have used quebracho would seem to have been sufficiently satisfactory to warrant its further trial.

The first case was of a little girl four years of age, with inflammation of the lungs from reckless exposure. She had been sick three or four days, growing gradually worse, until her condition became such that I had grave fears of her life. In this extremity I commenced the use of quebracho, fluid extract, gtt. ij, every two or three hours. Improvement came very soon; in twenty-four hours she seemed out of danger and made a satisfactory recovery.

The second case was that of a child about one year old. This case passed through the ordinary course of a moderately severe attack of pneumonia and seemed fully convalescent. But the mother was a woman of very little intelligence and was more likely to be found sitting in a draught of air with the sick child in her lap than otherwise. A relapse occurred; the symptoms, as usual, were more severe than in the first attack, and in two or three days the child seemed about to die. I prescribed fluid extract quebracho in the morning as a last resort, and with little or no hopes of benefit. At noon the lips and even the ends of the fingers of the little sufferer were decidedly blue, and all of the symptoms seemed to indicate speedy death. The use of the quebracho was continued. The symptoms of failure in oxidation passed off after two or three hours, and the other symptoms seemed somewhat ameliorated, but the long duration of the sickness, together with an utter lack of intelligent care, proved, as might have been expected, too much for so young a child, and after two or three days it died.

The question of practical interest seems to me to be this: Would the cyanosed condition have passed off without the use of quebracho? If it had not, death would certainly have occurred several days sooner than it did.

I regret that the report of the cases is so loose, but I have no notes and can do no better than to give general impressions; these, however, are based on considerable experience, and, as I said in starting, would seem to make it right to further test the merits of this remedy, which, if it will do what is claimed for it, certainly occupies a unique place in therapeutics.

Jamaica Dogwood in Nervous Headache.

By Elmore Palmer, M. D., Boulder, Colorado.

HAVING some months since received a sample of Jamaica dogwood, I put it to severe test in a case of pure nervous headache in my own family, my wife, who inherited this trouble from her father. This headache has never observed any regularity in her case; at times weeks and months would intervene between the attacks, at others only a few days. At times she has been able to get only temporary relief from the different anodynes. She had worn out the good effects of hyoscyamus, valerian, chloral hydrate, potassium bromide, and all the long line of stomachic regulators, tonics, etc. She began with Jamaica dogwood, without any hope or faith and only at my urgent solicitation. Since the first trial I have to report "no more headache." Occasionally now she feels "just as though her headache was going to return," when a teaspoonful of fluid extract Jamaica dogwood (P., D. & Co.'s) settles the business effectually and at once, and peace and happiness reigns supreme in our household. I am using it in other cases and will report when I am satisfied of the permanent effects.

Translations.

[All articles signed "T" are translated for The Therapeutic Gazette by C. W. Tangeman, M. D., Cincinnati.

Paraldehyd as a Hypnotic.

A chapter in therapeutics that demands our attention in the highest degree, is the chapter on hypnotics. In spite of considerable experimental research in the past years we have come almost to a standstill in this direction. The reason for this apparent lull, if we may call it that, is possibly to be found in great difficulties that experimenters must overcome when observing the action of this class of drugs; true, most experiments are made on animals, but we know well enough that the precision of calculating the effect on the much finer human organism is far from complete or satisfactory. We need only recall some of the combinations, such as morphio-chinin, morphio-chloral, opio-chinin, etc., and we know what an effort has been made on one hand to increase the number of hypnotic agents, while an equally great effort has been made to find combinations of the known remedies with tonics, in order that they might not be so often contraindicated.

In instances where sleep was to be produced by all means, we were limited to only three remedies, opium, chloral and morphine, a condition of affairs that was by no means pleasant, especially if we think of the terrible effects that the long-continued use of morphine or opium produces, or in cases where the physician stands powerless on account of the idiosyncrasy of the patient, which contraindicates the use of either of the mentioned drugs. The cannabis preparations are not active enough; they are too mild, even the recently introduced cannabinum tannicum.

Taking all of these points into consideration, a work such as that published by Morselli on the hypnotic and relative action of paraldehyd in mental diseases, commands respect.

It is not a great many remedies, especially new remedies, that are lauded to the skies, and recommended for the relief of everything. The various experiments and their results inspire a certain confidence and reliance in the writings of M. that will invite and stimulate others to work in that direction. Paraldehyd is a colorless liquid; boils at 124°, has a specific weight of 0.9993, more soluble in cold than in warm water; it crystallizes at a low temperature, and again melts where the mercury rises to 10.5°; it has a sharp, pungent taste similar to oleum pip. menthæ. The general physiological action was studied by Cervelli, in Palermo, and later by Schmiedeberg, Strassburg. When given to animals under the skin, after respiration the first effect was diminution of sensibility, then sleep came, without a stage of excitement. The effect on the medulla was to reduce respiration and also slightly affect the heart-beat: even by larger doses blood pressure is not

reduced, large doses causing death by paralysis of respiration. The reflex excitability remains intact under ordinary doses; larger doses lessen it while lethal doses suspend it entirely. Morselli made this observation on the inmates of the insane asylum at Turin: The results as follows: "I employed it 336 times in 50 individuals, and 28 times or 8.3 per cent. there were no hypnotic effects; corresponding very nearly with the negative percentage of Morselli, 8 per cent. The administration of paraldehyd means to sleep, sleep coming on in about ½—¾ hours, depending on circumstances

The sleep is itself quiet and can be compared to natural rest, as some very intelligent patients stated they did not remember any disturbances; duration depends largely on the dose, but usually lasts from 3 to 7 hours and over, in some cases it amounts to 12 hours. The condition of the individual under the influence of paraldehyd can be compared to the appearance of a healthy person soundly asleep: respiration is deeper and slower, the pulse diminishes in frequency only in such cases where it was abnormally rapid beforehand. Authors cannot record a single bad effect; digestion was only disturbed in two female patients, after the fourth dose slight nause and anorexia; five patients complained of the persistent odor which disturbed their appetite. I administered it in a case of dementis paralytica, in cases of fatty degeneration of the heart, and this proved to me that even in cases with a tendency to vaso-motor paralysis, or advanced atheromatous degeneration, paraldehyd can be given with perfect safety and with good results. After experimenting but a short time I found that patients with a constitutional or acquired tendency to a neuropathic condition, hysterics and hypochondria are particularly susceptible to the drug. "The sedative power of paraldehyd is one of great interest and should be more thoroughly investigated; it is more powerful than chloral and should be preferred because it can be continued for some time without any danger whatever. The best way to give it is by the mouth; in combination with tinctures, it is soluble in 2 parts tr. cort. aurant. which also hides the taste somewhat. The ordinary dose is 3 grammes, which must be varied according to circumstances.—Gugl in *Zeitschrift f. Ther.* T.

Pied D'Aulette (Lark Spur) and its Therapeutic Uses.

Dr. Benemuti has employed this plant with success against pediculi pubes; in the form of an infusion of vinegar (3 parts of the flowers to 100 parts of vinegar), after it has macerated for 36 hours. Two applications are usually sufficient to destroy the insects and their larvæ without producing any blistering or pain to the skin. Charpie or cotton, soaked in the same liquid serves as a very satisfactory dressing in ulcerating buboes where the ordinary preparations such as ferric tartrate of potash, tr. iodine, hyposulphite of soda, and iodoform have failed; eight days are sufficient to produce cicatrization. If the acetic solution produces any tumefaction of the skin the author substitutes the following aqueous preparation:

Eau commun, 100 grammes.
Fleur sèches de delphinium, 3 grammes.

Macerate for 36 hours and press until you obtain an odorless colored liquid. The author thinks positively that the flowers of larkspur have an insecticide action. The medicament also enjoys a very marked anæsthetic action; it is also an excitant, slightly rubefacient, astringent and azymotic; it has different titles but in comparison, it comes nearer the effect of phenic acid and iodoform. [NOTE BY TRANSLATOR.—This plant though indigenous to Europe has been introduced into the United States where it now grows wild in the fields; it belongs to the family of ranunculaceæ, and flowers in June and July. The flowers possess a bitter acrid principle and formerly were thought to have the power of healing wounds; that is really where it received its name consolida delphinium;they were also credited with diuretic and emenagogue properties.

Those living in the country will readily recognize the plant, the leaves are divided into linear segments widely separated and forked at the summit; the flowers are of an azure blue color; the seeds are found in smooth solitary capsules. The new properties attributed to the plant, especially its insecticidal, are original, and it may become valuable if for no other than the above effect; it produces its results so much more pleasantly to the patient than any of the ordinary remedies. A tincture in ten drop doses has been used in England and America.—*Le Monde Pharmaceutique.* T

The Action of Pilocarpine on the Heart.

There are two different theories concerning the action of pilocarpine on the heart. According to Kahler and Soyka it causes a diminution of the intra-arterial blood pressure; therefore it would naturally be contra-indicated in all diseases that have a tendency to diminish the arterial blood pressure, or where the heart action is insufficient; Vulpranasso shares this opinion, and advises that pilocarpine should not be used in diseases of the heart.

Dr. Renzi on the other hand claims exactly the opposite effect for the drug, and recommends that it should be administered in diseases of the heart where an increase of force is indicated. In order to decide this point, Queirolo concluded to make a number of experiments, relative to the blood pressure and his results are as follows:

1. A few moments after a subcutaneous injection, even prior to physiological action the ascension line is found to rise markedly.
2. The intra-arterial pressure sinks gradually at the same time.
3. The frequency of the pulse increases.
4. After a considerable length of time (1 or 2 hours) the ascension line sinks to the level that it occupied before the injection, and the intra-arterial pressure sinks very markedly at the same time. These experiments show that pilocarpine has a weakening effect on the heart, consequently it must be condemned in diseases of the heart since in such cases our point must be to keep up the activity and power of the heart.—Dr. Queirolo, in *Centblatt f. Allge. Ther.* T

Convallaria Majalis.

A. Langlebert writes quite at length about the therapeutic properties obtained from the lily of the

valley, which has caused quite an interest in the treatment of diseases of the heart. In 1843 "Walz" obtained two glucosides from the lily of the valley, convallamarin and convallarin. In 1865 St. Martin obtained the alkaloid (majalin) an acid, an ethereal oil and a yellow coloring matter. By the action of dilute acid convallamarin split up forming sugar and convallamaretin, and convallarin formed sugar and convallaretin. The main therapeutic properties of the plant seem to lie in convallamarin and majalin, while convallarin is absolutely inert. For some time past the scientific world has been investigating convallaria majalis, the domestic remedy of the Russian peasant for dropsy. Cazin administered the blossoms in the form of a confection and obtained marked cathartic effects. The root causes catharsis and vomiting. Schulze prepared an alcoholic bitter extract from the blossom, given as a cathartic in two drop doses.

Houters, Peyrille, Carthensen and Klein, obtained a cathartic from convallaria similar in action to scammony and aloes. Until this time the effect on the heart had not been thought of by any of these observers. It remained for Prof. G. Seé to demonstrate by experiments that all the parts of the plant used contained a somewhat different action. According to experiments the best results are obtained from a watery extract prepared by using ⅔ blossoms and stems, and ⅓ leaves and roots, by weight. This extract is devoid of the cathartic principle, is of a shining black color, quite firm consistence, is very bitter to the taste and is soluble in any quantity of water or alcohol. It possesses quite an agreeable and lasting odor. This extract has been used to prepare an aromatic syrup, in the proportion of 50 centigrammes to the tablespoonful.

In diseases of the heart, 2 to 4 tablespoonfuls may be given as a dose. Hardy obtained convallamarin in an amorphous condition, by treating the watery extract first with alcohol, and then with chloroform or amyl alcohol; the effect of this preparation can be compared to the effect of pure digitalin.

In order to accurately determine the dose of this extract, G. Seé (who attaches great therapeutic effect to this medicament), administered it to animals and calculated the dose for heart disease to be 1 to 2 gr. of the extract.—*L' Union Pharmaceutique, vol. xxiii, p. 337-340.—Bul. de Ther. Arch. d Pharm., December, 1882.—Anzeige Blatt. des Apotheker Verein.* T

Pilocarpine Injections in Morbus Brighti.

An article in the British Medical Journal condemns the use of pilocarpine in morbus Brighti. Prof. Sousa Martius claims a certain caution is necessary prior to use of the remedy. It should never be given until the physician has convinced himself that the sweat glands functionate properly. This can be determined by giving the patient a vapor bath. If this causes diaphoresis, pilocarpine can be given with advantage; should this not be the case, pilocarpine will positively be injurious. The explanation for this is simple: In long continued anasarca of morbus Brighti the skin is affected and the sweat glands cease to act properly. In the case of a young man æt. 18, suffering with anasarca, œdema of the lungs and albuminous urine, 2 ctgrm. pilocarpine were administered subcutaneously; brain symptoms soon set in, and the patient died the same evening. The cause of death was compression of the brain caused by an effusion of serum under the arachnoid. The author attributes this effusion to the action of the pilocarpin. Because it could not produce salivation, diaphoresis, diuresis, etc., it spent its action on the *pia mater* and arachnoid and thereby caused this effusion.—*Centralblatt der Gesammt. Ther.* T

Nitrite of Amyl in Therapeutics.

Dr. D'Ancona has employed nitrite of amyl for 5 years and is well satisfied with the results that he obtained. According to his experience it is indicated and has an admirable effect in acute inflammatory diseases of the respiratory organs, in cases where either old age or a high degree of dyspnœa endangers the life of the patient. The effects of the drug pass off rapidly; in fact they cease when the patient stops inhaling it; thereby we are enabled to use the remedy for days without causing any untoward symptoms. The fear of employing so active a medicament has prevented many an observer from obtaining its full benefit. He prescribes from 5 to 20 drops, repeated as often as is necessary, inhaled from the handkerchief.—*Centralblatt der Gesammt. Ther.* T

Correspondence.

Wanted—A Diagnosis.

Under this heading is stated in a recent number of the GAZETTE a case very briefly, by Dr. I. Phipps, of Stanton, Mich; in fact, from the short statement very little can be gathered upon which to make up a diagnosis. Undoubtedly it is a case of shattered, or I might say, completely broken down nervous system. This may have resulted from one of many different causes, or from more than one. The six years of spinal affection mentioned, might lead one to suspect deleterious secret practices. I have a case in my mind precisely parallel to this case, in all its symptoms, so far as stated, the result of severe mercurial salivation. There are two important points, suggested to my mind, as to treatment, viz., to build up the health, and to attend to the generative organs. For the former I would rather rely on pure linseed oil than any one remedy. I prefer it to cod liver oil, because it is more digestible and better tolerated in the majority of cases. Lacted pepsine, or better, a combination of malt and pepsine is a good addition, and makes it more palatable. As to the womb and its appendages I would rather rely upon viburnum prunifolium, than or any one remedy known. This great female remedy has been justly called a "Woman regulator." If the case is of malarial origin, quinine and hyposulphite of soda might be used to advantage, either alone, or in combination with such other remedies as the case may suggest. With the remedies above mentioned, I have had several years experience, in a practice largely female, and when combined with others, to meet the indications, as they arise in each case, and properly timed and dosed, I have been well pleased with their action.

R. L. HINTON, M. D.

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The Practitioner and His Medical Journal.

THE editor of the Physicians' and Surgeons' Investigator is blue. He puts honest work and lots of it into his journal, and gets a fair amount of praise therefor. Notwithstanding this fact, however, his subscription list while it is as large as that of the average medical journal, is not as large as it should be, and, worse than all, those who have subscribed do not return their thanks and appreciation in as substantial a manner as is necessary to keep the editorial spirits up to a proper degree of elevation. This condition of affairs causes our contemporary to give utterance to the following solid chunk of wisdom: "praise is lovely; it enkindles around the heart a warmth which makes the cheeks glow and the whole body tingle with rapture; but without food and raiment the whole structure, sentiment and all, must fade away and die."

We have little doubt that our contemporary voices in his Jeremiad the sentiments of the majority of the medical editors of this country. It is a fact, strangely unaccountable but still a fact, that a large percentage of the amount due on subscriptions to medical journals must annually be charged up to profit and loss. Doctors are notoriously indifferent business men, a fact which finds ample illustration in the slipshod methods which characterize their financial relations to their patients, as, for instance, allowing a dilatoriness on the part of their debtors which would speedily involve a business house in bankruptcy. But while this is a fact we have yet to learn that the practitioners of medicine are less honorable in the matter of paying their honest debts than are other people. While they are bad collectors they are, as a rule, good payers, and the very natural consequence is much less wealth in the ranks than should legitimately accrue to a vocation demanding so large an investment of education, sobriety and industry. How is it then, in view of this fact, that there is necessary the large debit to profit and loss to which we have above referred, to balance the books of the publisher at the end of each year? The answer is to be found, chiefly, in the fact that in the majority of instances the publisher is a doctor who projects his method of collecting from his patients into his dealing with the subscribers to his journal. The vast majority of the medical journals published in this country are not run, primarily, as business ventures, and if at the end of the year it has been found that enough has been collected from subscribers and advertisers, to pay off the printer and the post office, the publisher congratulates himself on his success. He has been amply rewarded in the other than strictly direct financial revenue which the publication has brought him in. It is these amateur publications which have made the business of publishing a medical journal for the money there is in it, such an unpromising field for capital. The dilatory and unbusiness-like methods of the amateur publisher, have tended to educate the readers of medical journals unconsciously to feel that they amply repay the editor for his journal by the compliment which they do him in regularly reading it.

Instead, therefore, of railing at the profession, as our contemporary does in the article to which we have alluded, we would suggest that he turn his eyes inwardly. A little introspection by the guild might suggest the more effective method of remedying the very palpable evil complained of. Let there be a concerted action among publishers looking to a cash basis in the matter of subscriptions, and we believe the profession would promptly pay for the journals they subscribe for. While the motto "no pay, no journal," would, doubtless, cause many suspensions among such journals as are conducted more particularly for the amusement of their editors, it would greatly improve the quality of the fittest which would survive, and would thus compensate the diminution in numbers by an improvement in quality.

There is a timeliness in the discussion of such a question as the above at this season of the year when the volume in the case of the great majority of journals is about to close. The practical application of our remarks, in the case of the THERAPEUTIC GAZETTE, is clearly indicated by the bills which such subscribers as have not remitted for the current volume, will find enclosed in the present number. It is scarcely necessary for us to remind such subscribers that they have received such a value for bills rendered as is furnished by no other medical journal, in this or any other country. We have conscientiously striven to do our whole duty in keeping them *au fait* in the progress of therapeutics, and we hazard nothing in the assertion that in no journal published has there been given the same amount of instruction in the same time, in this practical department of medicine. It is only the phenomenal success of the GAZETTE which has enabled our publisher to place the large amount of space at our disposal which he has for the insignificant sum of one dollar. The subscription list of the journal is exceeded, in *bona fide* subscribers, by that of no other journal published in this country. This list now numbers over 11,000 names, and is steadily increasing at rate which warrants us in predicting that at the close of our next volume this number will be increased to at least 15,000.

It will require but a slight familiarity with the ex-

pense of printing, to convince any one that the margin on the publication of twelve numbers of a royal octavo, double-column journal of 44 pages of brevier type, must be too small to permit of many losses. We can, moreover, all the more urgently request, on behalf of our publisher, a prompt attention to the enclosures in this issue, because of the fact, which it requires no egotism on our part to state, that those to whom they are sent have received full value for that which they are now requested to pay. Let each of those thus reminded give the matter immediate attention. He will enjoy his journal for next year all the more because of the knowledge that he is clear on the books.

What Is A Gallon?

NOW that the formulas of the U. S. pharmacopœia are given wholly in parts by weight, while the almost universal practice of pharmacists is still to measure rather than to weigh liquids, the exact ratio of the unit of capacity to that of weight assumes a new interest and importance. In the decimal system this ratio is extremely simple. One cubic centimetre of distilled water, at its maximum density (39.1° F. or 4° C), the mercury in the barometer standing at 760 millimeters (29.922 in.) weighs one gramme; or one litre, under the same conditions of temperature and pressure weighs one kilogramme. This ratio is fundamental to the system; if in practice it does not actually exist, it is from the impossibility of producing standards that shall conform exactly with theoretical requirements. But if water be measured under any other conditions than those specified its volume will not coincide, even in theory with its weight. Thus at its maximum density, a cubic centimetre of water would weigh in a vacuum 1.001274 grammes if weighed by a spring balance, since the air displaced by the water when weighed in the usual way, at 760 mm. barometer, weighs 0.001274 g m. At 15. 6° C (60° F) one c. c of water weighs, under a barometric pressure of 760 m m. .999068 grammes; in vacuo, at the same temperature it would weigh 1.000294 grammes.

Strict attention therefore must be paid to temperature at least, in calculating the volume of fluid from its weight, or vice versa.

Our own system of weights is connected to that of measures by an enactment of the British parliament, fixing the weight of an imperial gallon of distilled water at ten pounds avoirdupois, temperature 62° F., barometer at 30 inches, and decreeing that the capacity of this gallon shall be 277.274 cubic inches. It is easy to deduce from these figures the weight of a cubic inch of water, and from this to calculate the weight of our own gallon of 231 cubic inches. Unfortunately we have customarily adopted 60° F. instead of 62° F. as a standard temperature, and the U. S. pharmacopœia complicates matters still further by assuming still another temperature, 59° F. (15° C.) as the standard to be hereafter employed in preference to any other. The weight of a pint of water is, however, stated by that authority as taken at 60° F. and in this discussion it will be best to adhere to that temperature. Let us first see what will be the weight of a gallon of water at this temperature, if the British law is to be regarded as final authority in the matter. According to this enactment, one cubic inch of water at 62° F. 30 in. barometer, weighs 252.458 grains; a cubic inch of air, under the same conditions weighs 0.30816 grains, making the absolute weight of the water 252.76616 grains. The density of water at 62° as compared with water at its maximum density is .99889. The absolute weight of a cubic inch of water at 60° is, therefore, 252.8109; its weight in air, at 30 in. barometer 252.5027. This gives the weight of a gallon of water at 60° F., barom. 30 in., 58328.1237 grains, a value 1½ grains less than that adopted in the U. S. P.

The U. S. Dispensatory gives the gallon as 58.328.8862 grains, referring as authority to G. Schuckberg, and this result coinciding closely with that deduced from the authoritative British standard may be accepted as doubtless correct. It is probable that it represents the latest scientific determinations of physical constants.

Other authorities, however, give a different value, and that which has been adopted by the U. S. custom house authorities, although not established by legal enactment, varies quite materially from this, although it has come to be known as the U. S. legal gallon. The weight of this gallon is stated to be 58372.1757 grains at a temperature of 39.83° F. which was evidently taken to be that of the maximum density of water. This gives for 1 cu. in. of water weighed in air at 39.8° F. 252.6934 grains, equivalent to an absolute weight of 253.0151 grs. The density of water at 39.8° being 1.000005, that of water at 60° is .99906, and the absolute weight of a cubic inch of water at the latter temperature is 252.7780, or weighed in air, at 30 in. barom. 252.46991 grains. The legal gallon, therefore, at 60° F. contains 58320.5377 grains, or nearly eight grains less than the gallon based upon the British standard. Dr. Squibb in his elaborate tables for the valuation of alcohol has adopted as the weight of a gallon of water at 60° F. 58320. grains.

But how do these figures compare with the fundamental ratio of the decimal system connecting weights with measure?—Not so well as we could wish. We have already given the theoretical weight of 1 c. c. of distilled water at 60° F. Let us now deduce it from the weight of one cubic inch of water in grains at the same temperature. One litre contains 61.02705 cubic inches. At 69° F. therefore it will contain 1540.96963 grains, at 39° F. it will contain 15422.896 grains instead of 15432.3488, as it should. The discrepancy we do not attempt to reconcile but point out its existence. None of the authorities explain it, or even notice its existence. The U. S. P states that one minim is equivalent to .0616 gramme or 0.950631 grains (or following the more exact statement immediately preceding: .061613 c. c. equal to 0.950832 grains). Nothing is said about the conditions of temperature or barometric pressure, but it is stated on the preceding page that one minim of water at its maximum density weighs 0.95 grains (more exactly 0.9502). It is evident that the value of a gallon deduced from the relations of metre to inch, gramme to grain and litre to gramme, would be greater than either of those given, but there is no use in computing this theoretical value. That which interests us is the practical question, what is the recognised gallon of the United States? and to this question we are obliged to answer that authorities are in conflict. We bring together the results of our research thus:

At 60° F. and 30 inches barometer, one wine gallon contains of distilled water:

(U. S. legal gallon), Hassler,.....	58,320.5577 grs.
U. S. legal gallon (Squibb).....	59,319.5714 "
Deduced from Imperial gallon.....	58,328.1237 "
British Standard (W. H. Pile).....	58,328.4510 "
U.S. Dispensatory Sir G. Schuckburg	58,328.8862 "
U. S. Pharmacopœia 1880.....	58,329.6000 "

The value of the litre deduced from various sources is as follows:

Theoretical, at 39° F.....	15,432.3488 grs.
" " 60° F.....	15,418.0535 "
Deduced from Imperial gal., at 39° F	15,422.896 "
" " " " " 60° F	15,409.696 "

The agreement in these results is sufficiently close so long as these calculations involve only small quantities of material, but when large amounts are in question the divergence becomes important, and some standard should be fixed by especial legal enactment—in harmony if possible with that of Great Britain. A perfect reconciliation of the standards of the decimal system will require, doubtless, a conference of scientific men from the principal nations interested; if this could result in the universal acceptance of a perfected decimal system, future generations would be saved a vast amount of mathematical drudgery, as well as a world of unnecessary misunderstanding, perplexity and vexation of spirit.

A Trade-Mark Decision.

BY a decree of the Superior Court of Rhode Island issued in July, 1881, the manufacturers of "Hughes' Acid Phosphate" were enjoined from offering for sale "Acid Phosphate" so-called, which was an imitation of Horsford's Acid Phosphate. Having recently violated this injunction the Rumford Chemical Works Co. brought action against them and succeeded in having them mulcted, Sept. 24th last, in a fine of $600, and that firm, flushed with its success, now warns all persons from selling any imitation of their preparation, as they will by so doing make themselves liable to an action for damages.

We deem it scarcely necessary to comment on this latest revelation of the cloven foot, before a constituency of readers who either formally endorse the provisions of the Code of Ethics of the American Medical Association covering this matter, or believe that the humanitarian element in medicine should be more prominent than the mercenary. The decision of the Supreme Court of Rhode Island is both opposed to decisions given by higher judicial authority and contrary to all correct principle. The Rumford Chemical Works Co. have an undoubted right, in reason and in law, to an exclusive proprietorship in Horsford's Acid Phosphates, but "Acid Phosphates" is the distinctive name of a preparation which has no other name, and is thus common property, and for the same reason that the name "compound cathartic pills" is common property. Brown & Williams may have a proprietary right to B. & W.'s Compound Cathartic Pills, but that fact does not prevent Jones & Smith from making compound cathartic pills, as long as they do not sell them as Brown & William's. Any other rule than this would paralyze progress, and bring about that universal system of monopoly which is the grand aim of the copyrighted trade-mark.

In view of the sentiments of the ethical portion of the profession on the copyrighted trade-mark abuse, it is not a little surprising to see such a journal as the Weekly Medical Review approving the the decision of the Rhode Island Court with the remark, "So much for trying to steal a reputation," while the comments of the Medical and Surgical Reporter on the same are very poorly calculated to foster that breadth which is the beauty of medicine as a profession: "The disreputable and growing practice of infringing upon well-known and meritorious articles after they have acquired reputation, popularity and value, should," it says, "be discountenanced by all respectable dealers as it by the courts, and the attempts of unscrupulous persons to build up a business upon the capital of somebody else, and thus perpetuate a wilful fraud on the community, should be everywhere condemned." Fancy the condition in which medicine and pharmacy would have been to-day had the sentiments here expressed shaped the conduct of those whose labors have contributed to exalt these professions to their present proud position.

As opposed to the sentiments of our contemporaries above referred to, and as more truly expressive of those of the profession on the question of means looking towards the monopoly, for selfish ends, of anything which has in it the promise of relief for human suffering, we are pleased to note the following passages in recent papers: "The profession that would not permit the patenting of valuable surgical instruments, or appliances, nor the patenting of ether, chloroform, quinine, or a thousand other valuable remedies that, pecuniarily, could have been made as valuable as the sewing machine, or telephone; the profession that would not conceal vaccination; who, in a century, have lessened the amount of disease more than one-half; who have battled more than all other professions for the prevention of disease, by sanitary laws, could ill-afford to tarnish their record of the past by advocating a selfish law for the present."*

"Again: How are we to distinguish among these various alleged manufacturing chemists? Not one of these gigantic advertising medical swindles but what style themselves 'chemists.' 'Well,' these men will reply, 'the profession know for we have the indorsement of some of their best men.' Exactly, and there is where the laugh comes in.

"Here are a class of men depending almost entirely upon the profession for support, who travel just as close to the dividing line between true and false medicine as they can and escape detection. Only the other day I received a letter from an Eastern institution saying that they had sent me a sample bottle Phosford's Acid Horsephates or something of the kind (recommended by physicians), and enclosing a postal card for a reply. The reply went in short meter, and to this effect: 'All I know about it is that like any ordinary well-advertised nostrum, I had to take a dose of it every time I picked up my morning paper, and even in my Sunday reading it came recommended by a clergyman, and that I had had enough of it to do me 2,700

*Address on Charlatanism delivered by Jesse Hawes, M. D., Greeley, Colorado, before the 1883 meeting of the Colorado State Medical Society.

years.' Now my dear doctor, I ask you 'and through you, the various members of the American Medical Association, is it right or proper that we of the profession, who have to work for a living, should be pestered and bothered in our work in that way?

"There is another class of 'manufacturing chemists' who do not insinuate their advertisement under everybody's nostrils, but who prey upon the profession with pseudo remedies. They give a formula right along with the bottle. Oh yes, but it is like the 'prescription free' which used to come from the physician down in New Jersey, whose 'sands of life were nearly run out'—they are the only ones who can prepare it—and their profit is like unto the Dutchman's one per cent.

"Isn't it getting to be about time that the profession began to sit down on these open advertisers and secret venders? I guess yes. And when they do, these people will think a mule has kicked them, for it always kicks a man twice before he gets out of reach."*

The Collective Investigation of Disease.

IT needs scarcely to be explained, at this late day, that the collective investigation of disease contemplates the simultaneous attention of physicians, in different sections of the country, to such particular features of any affection as may have been suggested by some central mover of the scheme. The object of such investigations is, obviously, to gather the fruits of the experience of practical men in order that the accumulated mass may be so crystallized as to emit such a light as may serve as a lamp to the feet in directions along which there is constant and grievous stumbling because of the darkness. All light of sufficient power to penetrate the dark places in medicine is the outcome of experience. Any light which has not its source in this is an *ignis fatuus*. This must necessarily be so while the incomprehensible something which we call vitality, and which modifies the deductions from the crucible and the test tube, is an arcanum beyond the outer limits of which it is not permitted the eye of man to peer.

Experience, therefore, being the source of medical knowledge the most efficient means of collecting the greatest volume of such experience on a given subject, must commend itself to all who realize the need of more knowledge. As a means to this end the collective investigation, as it is now understood, has been declared to have in it the promise of a potency which has not attached to any means heretofore practiced. The leading medical journals, both of England and America, have cordially endorsed the plan, and in the former country it has been engaged in on an extensive scale. The Journal of the American Medical Association in its issue of August 25th, last, cordially commends it to its readers and declares the subject to be "of sufficient importance to merit the attention of our readers, and elicit suggestions in regard to the best methods of procedure from those who are willing to give it their attention."

The first effort on the plan of collective investigation above referred to, made in this country, was the collective investigation of diphtheria as conducted by the THERAPEUTIC GAZETTE. The information collected in that effort and the deductions therefrom, have been published in book form. Thus far the book has been received with general favor by the medical press and the plan on which it is conducted has been generally endorsed in connection. A notable exception to this general approval occurs in the journal of the American Medical Association, whose views on the plan proposed, as entertained last Augnst, we have referred to. The reviewer of the book in its columns on November 3rd, declared that "the expectation of adding anything to scientific knowledge by such a method is based either on the assumption that the balance of medical opinion must be in the main correct, or else upon the supposition that some real pathological discoveries will be brought to light, whose obscure authors might otherwise have failed to publish them. We deny the first assumption *in toto*. It is reasoning in a vicious circle to uphold it. Average medical opinion is based upon medical authorities." "Medical, like other scientific discoveries, are made not by public opinion but by individuals, and such individuals who have mental capacity for original investigation do not need the patronage of a bureau of 'collective investigation' to discover their talents to the world." "The conclusions of the editor, after summing up the various views of contributors, are neither more or less valuable than if he had taken these opinions at first hand from the standard works, instead of letting the country practitioners do this for him and send him the results."

These quotations, besides indicating quite a decided difference as between the views of the editor on August 25th, and those of the reviewer on November 3rd, are in themselves remarkable for the sentiments they express. It will be news to the physicians of this country, to be informed through this representative organ, that there is a slavish conformity on their part to the teachings of the "authorities" so-called. The opinion has heretofore prevailed that the authorities are a reflex of opinions which have been crystallized in the experience of the "obscure practitioners" who do the work. Certainly there are few thoughts in the text books which had not found expression years before in the periodical medical literature. So true is this, and so universally recognized, that no progressive physician can afford to wait for the appearance of the volume by the "authority." The authorities, so-called, aid in the advancement of medicine principally in so far as they are able to work in the exact divisions thereof, as for instance in chemistry, anatomy, pathology and physiology. For his knowledge of the advances in these the practitioner is necessarily dependent on those whose tastes incline them to, and whose opportunities permit, their study and investigation. In the practical things of medicine, however, such students and investigators cannot be his guides. Herein his experience must be his guide, and the touchstone of the views expressed by others, to wit, "the authorities." Besides being a gratuitous reflection on the intelligence of the rank and file of the medical profession, and opposed to facts as they must present themselves to the most superficial observer, the assumption of the Journal of the American Medical Association ill befits a publication occupying its representative position.

*From a letter by Dr. E. B. Ward, Laingsburg, Michigan, in the Journal of the American Medical Association, Oct. 6, 1883.

Tincture of Nux Vomica.

AN interesting and instructive paper was read at the last meeting of the British Pharmaceutical Conference, on the alkaloidal strength of some of the officinal preparations of nux vomica. The authors, Wyndham F. Dunster, and F. W. Short, have devised a satisfactory method of separating strychnine from brucine in assays of this drug, and are able thus to state not only the total amount of alkaloid contained in the preparatiou assayed, but also the proportion of pure strychnine. The following are some of the results obtained in the examination of commercial samples of the tincture.

ANALYSIS OF TINCTURES OF NUX VOMICA.

No.	Specific Gravity.	Percentage of total Alkaloid.	Percentage of Strychnine.	Percentage of Brucine.
1	0.8426	0.224	0.077	0.147
2	0.8409	0.262	0.097	0.165
3	0.8438	0.208	0.068	0.140
4	0.8392	0.124	0.049	0.075
5	0.8450	0.360	0.121	0.239
6	0.8378	0.211	0.084	0.127
7	0.8377	0.136	9.046	0.090
8	0.8552	0.181	0.066	0.115
9	0.8398	0.196	0.077	0.119
10	0.8413	0.189	0.087	0.102
11	0.8407	0.168	0.060	0.108
12	0.8436	0.263	0.131	0.132
Average	0.8423	0.2102	0.0802	0.130

An inspection of these figures will show that the preparations of this powerful drug, as found in the market, vary so widely in strength that in order to produce the same effect two, and even three times as much may be required of one sample as of another.

If the tinctures were honestly and skillfully made there must have been a great difference in the alkaloidal strength of the drug employed, and it is well known that such differences exist. Admitting that the drug in each case has been completely exhausted, the average amount of alkaloid contained in the samples from which these tinctures were prepared was 1.769 per cent., of strychnine 0.674 per cent., or about 38 per cent. of the whole. In one instance the drug contained 3.04 per cent. of alkaloid, of which 1.022 per cent., nearly one third of the whole, was strychnine. In another instance with a smaller amount of total alkaloid, the drug contained nearly 1.1 per cent. of strychnine. On the other hand, the nux vomica from which tincture No. 4 was prepared yielding only 1.03 per cent. total alkaloid, 0.4 per cent. only being strychnine.

Variations such as these in a preparation at once so powerful, and so constantly prescribed by physicians, cannot be tolerated in this age of scientific therapeutics. Already a step has been taken in this country towards securing uniformity in strength in this particular tincture. The U. S P. of 1880, directs to make this preparation in such a way that it shall contain when finished two per cent. of extractive matter. If we could assume that the extractive matter itself is even tolerably uniform in strength, the U. S. P. preparation would fully realize our ideal; as it is we accept the improvement gladly, for what it is worth, awaiting the time, sure to come before long, when this and all similar preparations shall be made strictly by assay, of a uniform alkaloidal strength. Already these processes of assay have been applied to fluid extracts, and under the name of normal liquids, Messrs. Parke, Davis & Co., furnish preparations, standardized by assay, of all the important powerful drugs. We trust that before the time comes for the next decennial revision of the pharmacopœia, the art of pharmacy will have so far advanced that there shall seem to be nothing revolutionary in the idea of fixing the strength of all preparations of this class strictly by assay.

The Death of J. Marion Sims.

WHEN, on the 13th ultimo, the electric flash conveyed to the civilized world the intelligence of the sudden death of J. Marion Sims, the shock impinged with unusual force on the hearts of the medical profession. For nearly half a century had this great doctor been engaged in practice, and during the greater portion of these years, he lived in deeds that not only familiarized his name to his co-workers everywhere, but which will perpetuate his fame when his contemporaries are forgotten. He was, moreover, a chivalric man and possessed withal of a breadth of soul and kindness of heart which made him more than the most eminent gynæcologist of his own or any other age, and attached to him all who had ever come within the sphere of his personal influence. While the world deplores in his death the loss of a savant, all who ever enjoyed his personal acquaintance will mourn the death of one of nature's noblemen.

Dr. J. Marion Sims was born in Lancaster District, South Carolina, on January 25, 1813, and had hust at the time of his death exceeded by nearly one year the three score and ten which constitute the fullness of days. He graduated from Jefferson Medical College in 1835, and in the following year commenced to practice in Montgomery, Alabama. From the first he showed a predilection for surgery and particularly for surgical affections of the female genital organs. In the treatment of the latter his great genius found scope and the methods and inventions which he introduced contributed more than the labors of all previous workers in this field, to establish gynæcology as a special department of surgery. He will always be known as the introducer of silver sutures in the place of silk thread in the operation for vesico-vaginal fistula, thus making curable a disease which before his time was regarded as incurable. The story of his use of the spoon as a perineal retractor and the evolution out of this device of Sims' speculum—the greatest gynæcological invention—is too familiar to require repetition. These two inventions have done more for the relief of woman suffering from surgical diseases peculiar to the sex, than all others combined. To remove them from the gynæcological case would be to add heavily to the load of female sorrow. But while these alone have immortalized the name of Sims, they by no means comprise all of his improvements. The latter are too numerous for present mention; they are, moreover, well

known, having become incorporated in gynæcological literature.

Dr. Sims removed to New York in 1853, where he at once took the leading position his genius entitled him to. He established a Hospital for Women, which was at first supported by private contributions, but afterwards became a state institution. On the breaking out of the civil war Dr. Sims' political opinions were with those which determined the course of his native state in that unfortunate struggle, and during the four years of its continuance he remained abroad. His reputation had preceded him to Europe, and on his arrival his reception was cordial and flattering in the extreme. During his residence there he established a lucrative practice in the different medical centres, and ever since his return he has made regular annual visits abroad attending to a large clientele.

The immediate cause of death is supposed to have been heart failure. He was prostrated three years ago with pneumonia, from which he was brought so low that hope of his recovery well-nigh deserted his family and medical attendants. He rallied however, and up to within a few days of his death he supposed his health perfect, while his characteristic buoyancy of spirit showed no diminution. The autopsy revealed changes corroborative of the supposed cause of death.

The Medical News, Quinine Pills and Journalistic Independence.

WE reproduce on page 514 of our present issue an editorial from Gaillard's Medical Journal, for which we solicit the careful perusal of every reader of the THERAPEUTIC GAZETTE. Dr. Gaillard's vigorous pen was never taken up in a more worthy cause than in this rebuke of the Medical News for its wholesale charge of weakness and venality against its contemporaries. The exceedingly discourteous remarks of the Medical News were entirely gratuitous, and were instigated purely by the refusal of its contemporaries to join it in a hue and cry against an evil which has been since abundantly shown to be quite imaginary, or, if existing at all, to be inseparable from the most carefully conducted pharmaceutical manipulation. Dr. Gaillard has richly merited the thanks of the profession for thus, even at this late day, resenting the aspersions on the editorial independence of the medical press of this country. The silent contempt with which these aspersions were received was apt to have been misconstrued.

While the evidence which we have from time to time presented, in the analyses of chemists of repute, who, differing from the chemist of the Medical News, have not feared to attach their names to their analyses, have effectually refuted the charge of dishonesty against such manufacturers as enjoyed the confidence of the profession, we have taken the liberty to reproduce a synopsis of yet another analysis on page 517 of our present number. Mr. Virgil Coblenz's paper having been read before the highest pharmaceutical authority in this country, the American Pharmaceutical Association, received the endorsement of that body, in the remarks of the distinguished chemists who discussed that paper. It will be observed that of the eighteen samples examined only four were found to be sufficiently short to warrant a suspicion of designed fraud or culpable incompetency. While no names are mentioned Mr. Coblenz takes especial pains to state that none of the houses of good standing were detected in adulterating, or withholding sulphate of quinine. The fact that there are certain disreputable firms of manufacturers in this country has so long been known that no one in the least familiar with the products of the various houses, will experience any difficulty in placing his hand on the four firms whom Mr. Coblenz's analyses discovered to be wanting.

Incompatibility of Poke-Root with Stillingia.

OUR attention has been called by a correspondent to an apparent incompatibility between the fluid extracts of poke root and stillingia. The matter was referred to the analytical department of Parke, Davis & Co.'s laboratory. The fact of an incompatibility existing between these preparations was there verified, and experiments undertaken to ascertain its cause. It was there learned that the precipitate produced by mixing these two fluid extracts was not redissolved by alcohol, by alkalies, nor readily by vegetable acids, but that it was cleared up by mineral acids. The fluid extract of stillingia is rich in tannin, and it was observed that other astringent tinctures or fluid extracts produced in the fluid extracts of poke-root a similar precipitate. Further investigation elicited the interesting fact that poke-root contains a substance whose behavior to reagents is that of an alkaloid. It is removed from alkaline solutions by ether, and gives precipitates with Mayer's reagent, picric acid, phosphomolybdic acid (very dense) solution of iodine in potassium iodide, double iodide of bismuth a potassium—with alkalies, and in fact with all the group reagents for alkaloids. Its sulphate appears to be also a crystallizable salt. No mention has heretofore been made, to our knowledge of an alkaloid in this drug, and we shall await with interest a full report upon the chemical, physiological and therapeutic properties of this newly discovered body.

Changes in the U. S. Pharmacopœia, 1880.

ANY person having purchased a copy of the U. S. Pharmacopœia of 1880 and desiring a list of the corrections since made therein can procure same by sending a two cent stamp to Wm. Wood & Co., Publishers, 56 and 58 Lafayette Place, New York.

Book Reviews and Notices.

The Pathology, Diagnosis and Treatment of the Diseases of Women. By Graily Hewitt, M. D., Lond., F. R. C. P., Professor of Midwifery and Diseases of Women University College, and Obstetric Physician to the Hospital, Formerly President of the Obstetrical Society of London; Honorary Fellow of the Obstetrical Society of Berlin, etc. Edited with Notes and Additions by Harry Marion Sims, M. D., Attending Surgeon to St. Elizabeth's Hospital, New York, etc. Two volnmes. Price, $2.25 per volume.

An Encyclopædic Index of Medicine and Surgery. Edited by Edward J. Bermingham, A. M., M. D. Price, sheep $6.00; cloth, $5.00.

Insanity, Its Classification, Diagnosis and Treatment. A manual for students and practitioners of medicine. By E. C. Spitzka, M. D, Professor of Medical Jurisprudence and of the Anatomy and Physiology of the Nervous System,

at the New York Post Graduate School of Medicine; President of the New York Neurological Society, etc. Price $3.00.

The Diagnosis and Treatment of Diseases of the Ear. By Oren D. Pomeroy, M. D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to the N. Y. Infant Asylum; Consulting Surgeon to the Paterson Eye and Ear Infirmary, etc. Price $3.00

A Practical Manual for the Diseases of Children, with a Formulary. By Edward Ellis, M. D.,; Late Senior Physician to the Victoria Hospital for Sick Children; Late Physician to the Samaritan Hospital for Women and Children, etc. Fourth Edition, revised and Enlarged. Price $1.00.

A Complete Hand-Book of Treatment, Arranged as an Index of Diseases to Facilitate Reference, and Containing nearly One Thousand Formulæ. By William Aitken, M. D., (Edin.), F. R. S., Professor of Pathology in the Army Medical School; Examiner in Medicine for the Military Medical Service of the Queen, etc. Price $2.50.

Impotence in the Male By William A. Hammond, M. D., Surgeon-General U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in the New York Post Graduate Medical School; President of the American Neurological Association, etc., etc. Price $2.50.

*Practical Clinical Lessons on Syphilis and the Genito-*Urinary Diseases. By Fessenden N. Otis, M. D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York; Surgeon to St. Bartholomew's Hospital; to the New York Skin and Cancer Hospital, Fellow to the New York Academy of Medicine; Member of the British Medical Association, etc. Price $4.50.

The Disposal of the Dead. A Plea for Cremation by Edward J. Bermingham, A. M., M. D., Fellow of the American and New York Academy of Medicine, Member of the Anthropological Society of Paris, etc. etc. Price 30 cents.

The above works comprise a portion of Bermingham's Medical Library, and each volume is of intrinsic value. They are printed on good substantial paper and neatly bound. Together they are a nucleus of a medical library, and are more than reasonable in price. Many of the illustrations are entirely new.

No better book on the *Pathology, Diagnosis* and *Treatment* of the *Diseases* of *Women* than that by Graily Hewitt need be sought for. Written in admirable style it is full and complete, and what is new in American gynecology has been added by Dr. Sims.

The *Encyclopædic* Index of Medicine and Surgery is another work of value to the general practitioner particularly, giving briefly the epitome of diseases and their treatment. The aim of the author has been to make it concise and at the same time to be sufficiently explicit. We have no hesitation in recommending it to our readers.

Insanity, by Dr. Spitzka, was originally intended to cover no other ground than the definition, classification and diagnosis of insanity, and is in fact a surface view of the domain of this distressing malady. The author has in preparation a larger work on the subject to which the present volume is introductory. If the present work can teach *how* to diagnose insanity, it has well fulfilled its mission. We think the author has admirably well succeeded.

The Diagnosis and Treatment of Diseases of the Ear is a new book and comes before the profession on its merits. Dr. Pomeroy has not introduced the Anatomy or Physiology of the organ unless essential to the understanding of the subject, as there are other works that treat this subject more exhaustively, and to which he gives the proper acknowledgment. The author's opportunity to know of what he writes has been abundant, and the work itself shows that he has made good use of his information. We have not the slightest reason for not commending it not only to the otologist but also to the general student.

Ellis on the Diseases of Children is the standard of the professor of diseases of children in the Michigan College of Medicine, and in his opinion is a standard work. We have had occasion to familiarize ourselves with it and have no hesitancy in cordially commending it.

The *Handbook of Treatment* by William Aitken, M. D. (Edin) F. R. S., is evidently a condensed statement of treatment of diseases as given in his larger work on the science and practice of medicine. All other matters are left out. We have had an instinctive opposition to all such books in medicine, as we believe them to be the hand-maids of quackery. "Tell me the name of the disease," says the old lady, "and I can treat it as well as the doctor." Books of this kind furnish this information—besides having a deleterious influence on the young practitioner.

Sexual Impotency in the Male, by Dr. Hammond is a subject in which more are interested than the object of the disability. It is an intensely readable work, and relates solely to males. What woe this condition brings into the family circle is beyond comprehension. Indeed ths same condition of the female produces the same results. The subject is one of vast importance and one on which the physician should be thoroughly informed. The author discusses his subject under four heads: First, Absence of sexual desire; second, Absence of the power of erection and of consequent intromission; third, Absence of the power of ejaculating the seminal fluid into the vagina; and fourth, The absence of the ability to experience pleasure during the act of copulation and during the emission of the semen; the emotion of love, etc. The advice given is sound, and has as much to do with results as the medication. At some future time the author proposes to discuss the subject of sterility in both male and female. The book is handsomely issued by the publishers.

Dr. Otis' Work on Syphilis and Genito-Urinary Diseases is the latest one of the kind issued, and he discusses the subject with all known information before him. The author has his own ideas which he does not hesitate to express, and which, being compared with our own knowledge of the subject, we cannot but admit are unusually sound. We would suggest as treatment for gonorrhœa, not only to the author but also to our readers, the plan laid down by E. J. Lloyd, Esq., surgeon to Bartholomew's Hospital, viz.: by chloride of zinc injections, (see London Lancet, American reprint, vol. 1, page 288, 1851). We have never known it to fail or a stricture to follow its use. The work of Dr. Otis will stand the challenge of any of his compeers.

The Disposal of the Dead by Cremation is attracting the attention of the sanitarian and also the medical profession. It is but a few years ago that the discovery was made that our grave-yards or ceme-

teries were vast hot-beds of disease, infecting not only the air we breathe but also the water we drink. Dr. Bermingham, in his preface, states that the mission of the brochure before us is to point out the "evils of inhumation, to assist in removing the prejudice against cremation, and to secure also advocates for this system of disposal of the dead." The subject is one of great importance and is becoming daily more so. We believe it to be a question merely of time and the more the information and the reasoning of the work before us becomes disseminated the sooner will cremation become popular.

The Medical Student's Manual of Chemistry. By R.. A. Witthaus, A. M., M. C., Professor of Chemistry and Toxicology in the Universities of Vermont and Buffalo; Professor of Physiological Chemistry in the University of the City of New York; Chemist to the City of Buffalo. etc.
New York: Wm. Wood & Co.
Detroit: J. MacFarlane.

This work, the author informs his readers, is solely for the use of a class of students whose need in the study of this science is peculiar. In its preparation he has striven to produce a work which should contain as much as possible of those portions of special chemistry as are of direct interest to the medical practitioner. From examination of the work we believe it to be a good one for the purpose for which it is written, and we, therefore, commend it to all those who are in need of such a work. It is handsomely issued by the publishers.

The Treatment of Wounds—Its Principles and Practice, General and Special. By Lewis S. Pilcher, A. M., M. D., Member of the New York Surgical Society. With one hundred and sixteen wood engravings. 1883.
New York: Wm. Wood & Co.
Detroit: John MacFarlane.

This is the August number of Wood's Library of Standard Medical Authors. It is written by a gentleman fully qualified by education and experience. As one of the editors of the Annals of Anatomy and Surgery he is well known to the medical profession of the country, and more especially in the domain of surgery. It is well illustrated and contains a full index. As one of the series it is a valuable number.

Elements of Histology. By E. Klein, M. D., F. R. S., Joint-Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew Hospital, London. Illustrated with 181 engravings.
Philadelphia: Henry C. Lea's Son & Co.
Detroit: John Willyoung.

This is a manual for medical students, but also contains much that will be acceptable to those more advanced. It is thoroughly illustrated and many of its illustrations are new. We do not hesitate to commend it to the medical student.

A Pocket Book of Physical Diagnosis of the Diseases of the Heart and Lungs for the Student and Physician. By Edward J. Bruen, Demonstrator of Clinical Medicine in the University of Pennsylvania; Assistant Physician to University Hospital; Lecturer on Pathology in the Woman's Medical College of Philadelphia, etc. Second Edition, revised, with additional illustrations.
Philadelphia: P. Blakiston, Son & Co.
Detroit: John MacFarlane.

The author treats his subject in as practical a manner as possible, and without laying special claim to originality of matter. We do not hesitate to give an opinion favorable to the work and much can be learned from its study.

Physician's Office Day Book. Designed by C. Henri Leonard, A. M., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology Michigan college of Medicine, Detroit. For 25 families per day.

This book is good for 4 years. For 50 families per day it is good for 2 years; for 100 it is good for one year. Family names need to be written but once a month. Yearly record plan. If desired the name need be written but once per year; one leaf will accommodate the business of two families daily for one year. Four will need to write the name of the month down the name-column, instead of different family addresses; this is all the change that will be necessarp in using the book in this manner. It will accommodate daily charges for one hundred families per year in this form. Price $2.00 post paid to any address. Issued by the Illustrated Medical Journal Co., Detroit, Mich. We have examined this work and find it all its author claims for it. It has besides a portion devoted to miscellaneous accounts and a complete obstetric memorandum. It is a most convenient account book and also very reasonable in price.

What to Do First in Accidents and Emergencies. A Manual Explaining the Treatment of Surgical and Other Injuries in the Absence of the Physician. By Charles W. Dulles, M. D., Fellow of the College of Physicians of Philadelphia; Surgical Registrar to the Hospital of the University of Pennsylvania; Surgeon to the Out-Door Department of the Presbyterian Hospital in Philadelphia, etc. Second Edition, revised and enlarged, with new illustrations.
Philadelphia: P. Blakiston, Son & Co.
Detroit: John Willyoung.

We expressed our opinion favorably in our notice of the first edition, and this, the second, maintains its reputation, besides having much additional information. To the new beginner it must prove a very useful little work.

A Treatise on Electro-Therapeutics, Clinical Cases of Diphtheria with Treatment. By J. H. Woodward, M. D., Professor of Materia Medica and Therapeutics, Representing the Eclectic School of Medicine in the Medical Department of the Nebraska State University.
Seward, Neb.: Blade Book and Job Printing. 1883.

This is an octavo volume of 107 pages in which the author places before his readers the value of electricity in the therapeutical management of diseases both general and local.

His object is to awaken new interest and facilitate its study. The author teaches how, when and where to apply it and how long it should be continued.

The student of electro-therapeutics will find it a very useful aid.

Illustrated Medicine and Surgery. Edited by Geo. Henry Fox, M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, and Frederick Sturgis, M. D., Professor of Venereal and Genito-urinary Diseases, Post Graduate Medical School of New York. Published quarterly by E. B. Treat, No. 757 Broadway, N. Y. Vol. II, No. iv, April, 1883.

The contents are:

Enchondroma, two illustrations.

Intellectual Monomania with Mental Depression, one illustration.

Tricophytosis Barba, one illustration.

Case of Rupture of the Choroid, four illustrations.

Syphilitic Stenosis of the Larynx: Tracheotomy, two illustrations.

Multiple Sarcoma of the Skin, two illustrations.

Deformity of Lower Evelid. three illustrations.

This number sustains the reputation of its predecessors. Price, $8.00 per annum, or $2.00 a number, postage prepaid.

Transactions of the Medical Society of the State of Pennsylvania at the 34th Annual Session, held at Norristown, May 9, 10 and 11, 1883. Vol. XV. Published by the Society. With the compliments of the permanent secretary, Dr. Wm. Atkinson. Pages 516 and bound in cloth.

The president's address (Dr. Varian) is devoted chiefly to sanitary medicine and other matters pertaining to the society itself. The address in Medicine by Prof. Tyson is on Malarial Hæmaturia and Hœmoglobinuria; on Surgery by Dr. Alex. Craig, principally devoted to Antiseptics; on Obstetrics by Dr. G. O. Moody; on Hygiene by Prof. Henry Leffman; Mental Disorders by Dr. John Curwen. Articles by other members were read and published, which with reports of county societies, a list of membership and a full index, closes the volume. We congratulate the Pennsylvania Medical Society on its professional interest and the prompt issue of its Transactions.

Burr's Index to Medical Subjects, Adapted to the Special Use of the Physician and Surgeon, for the Annotations of Particular References to matters found in Text-books. Medical Treatises, Retrospects, Reviews, Journals, Tracts, etc., and for the entry of Notes on Peculiar Diseases, or facts culled and observations made in Actual Daily Practice, etc.
Hartford, Conn.: The Burr Index Company.

The necessity of a book of this nature being conceded (and it is never disputed by any one competent to express an opinion), it only remains to determine the precise kind of a book best adapted to its end. We have examined many kinds but we do not hesitate to say that none which we have ever seen surpasses that now before us, while probably none even equals it. Its marginal thumb-hole cuts and its method of indexing by the first two letters are features which in addition to the excellent mechanical execution of the book especially recommend it.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and subjects. Vol. IV. E—Fizes. Washington, Government Printing Office, 1883.

It also contains the third edition of the alphabetical list of abbreviations of titles of medical periodicals employed in the index-catalogue published in the first volume. Pages 1,033.

We trust that Congress will see that the publication of this valuable work will not be delayed by any stoppage or irregularity of the appropriation, for when completed its value cannot be computed. Our thanks are due to the the Surgeon-General for the copy received.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Issued by the Illinois State Board of Health, 1883.

Our thanks are due Dr. Rauch, Secretary, for the copy received. It is intended to be a complete repertory of all the medical colleges in the United States and Canada, and as such is most valuable. Every physician should possess a copy. Not only does it give a list of the colleges, good, bad, and indifferent, but it also gives the laws in the different states regulating the practice of medicine and surgery. The Illinois State Board of Health is to be commended for its labor in this direction.

The Medical World. Published monthly. Terms 60 cents a year. Philapelphia, Pa.

This is a sprightly octavo of 16 pages. Unfortunately part of its pages includes advertising columns. Its first number was started as a weekly, but its second declares for a monthly. We have not seen the first number. There is evidently room for the World in the city of Brotherly Love. May success attend it.

The Courier-Record of Medicine. Edited by F. E. Daniel, M. D. and E. L. Stovel, M. D., Fort Worth, Texas. Published monthly. $2.00 per year in advance.

This is a journal of 46 pages, and we sincerely trust it has come to stay. The misfortune of Texas medical journals has been a sudden birth and a sudden death, life rarely extending beyond the period of dentition. The editors ask the aid of their patrons, and we wish them success.

The Physician's Daily Pocket Record. Comprising a Visiting List, Many Useful Memoranda, Tables, etc. By S. W. Butler, M. D. Eighteenth year. New and thoroughly stereotyped edition. Edited by D. G. Brinton, M. D., Philadelphia. Published at the Office of the Medical and Surgical Reporter, 115 South Seventh street. 1884.

This is one of the popular visiting lists, with continuous page and spring clasp. It contains all other information essential to a complete visiting list.

Index to the Transactions of the American Medical Association. Vols. I—XXXIII. Prepared by Wm. Atkinson, M. D., Permanent Secretary. It can be obtained by addressing Dr. R. J. Dunglison and enclosing one dollar.

It is a fitting termination of the association's proceedings as published in book form, and renders them of much more value than they would have been without it. The association's publication having taken a new departure, the necessity became imminent. It is issued in the style of the other volumes.

NEW JOURNALS AND PAMPHLETS RECEIVED.

The Atlantic Journal of Medicine. Richmond, Va. Vol. I, No. 1. Robert B. Stover, M. D. and Henry G. Houston, M. D., Editors and Proprietors. $3.00 per annum.

This is a journal of 76 pages and is issued in the interests of the medical profession and is published monthly. We have received three numbers and must congratulate the editors and proprietors upon their excellence. The list of contributors embraces the names of first-class men in their individual specialties, and success cannot well fail the journal.

The American Journalist. St. Louis, Mo. Vol. 1, No. 1.

This journal represents the interests of the working writers of the press throughout the land. Its object is to bring into intercourse such writers of the Atlantic coast with those of the Pacific, and *vice versa*, and to give the toilers of the pen a just recognition for their services.

Transactions of the Mississippi State Medical Association at its 16th annual session, held at Meridian, April 4th, 5th and 6th, 1883, with the Roll of Members, Reports on Medical Topics, and Revised constitution and By-Laws. Published by the Association. Dr. J. M. Green, of Aberdeen, President. W. E. Todd, M. D., of Clinton, Recording Secretary.

Observations on the Management of Enteric Fever According to a Plan Based Upon the So-Called Specific Treatment. By James C. Wilson, M. D., Physician to the Jefferson Medical College Hospital and to the Philadelphia Hospital. Extracted from the Transactions of the College of Physicians of Philadelphia. Third series, Vol. vi.

A Contribution to the Study of Neglected Lacerations of the Cervix Uteri and Perineum. By Thomas A. Ashby, M. D., Professor of Obstetrics, Woman's Medical College of Baltimore, Md., etc. Read before the Clinical Society of Maryland, May 4th, 1883.

Diagnosis of Ovarian Tumors. Lectures delivered by Edward Borck, A. M., M. D , Professor of Surgery, etc. St. Louis, Mo. Sent gratis upon the receipt of postage stamp Address the author, 1235 Washington Ave.

The Prophylactic Power of Copper in Epidemic Cholera. By Arthur De Noé Walker, M. D., London, England, with compliments of the author. Written twenty years ago, but now for the first time published, with a few additions.

Annual Announcement of the Medical Department of Niagara University, Buffalo, New York, Session of 1883–84. Established as a College and Seminary in 1856. A. M. Hubbel, M. D., 181 Franklin Street, Buffalo, New York, Secretary.

The Iowa State Medical Reporter. A Monthly Journal of Medicine and Surgery. Edited Expressly for the Medical Profession of Iowa. F. G. Crittenden, M. D., Editor. Terms, $2.00 per annum. Vol. I., No. ii. Des Moines, Iowa.

Answer of Thad. M. Stevens, M. D. to Charges of the Indiana State Board of Health, together with statements in proof and other matters. Reprint from the Transactions of the Indiana State Medical Society. Indianapolis, 1883.

Sanitary Suggestions. By Irving A. Watson, M. D., Secretary State Board of Health, Concord, N. H. Read before the New Hampshire Medical Society at its annual meeting June 20th, 1882.

The Work of Health Officers and of Local Boards of Health in Michigan, Including Duties Under Amended Laws and Passed in 1883.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland, at its 85th Annual Session, held at Baltimore, Md., April 1883.

Delayed and Non-Union of Fractures. By N. Senn, M. D., Milwaukee, Wis. Reprint from the Weekly Medical Review of September 29, 1883.

The New York Post-Graduate School, Announcement of the second year. Session of 1883–84. No. 213–215 East 23d street, New York.

Eighth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the fiscal year ending Sept. 3, 1880. By authority.

The Powers and Duties of Local Boards of Health. A circular issued to Health Boards and Health Officers by the State Board of Health of Wisconsin.

Report of the Proceedings of the Illinois State Board of Health Quarterly Meeting, Chicago, October 18–19, 1883.

*Twelfth Annual Report of the Secretary of the State Horti*cultural Society of Michigan, 1882. By authority.

Water Pollution—Wells. By the same author. Read before the New Hampshire State Medical Society. 1883.

Therapeutic Progress.

The Medical News—Quinine Pills—and the Higher Walks of Journalism.

Gaillard's Medical Journal: In the last issue of this journal, something was said about "The Higher Walks of Journalism" and the foolish pretension of those who claim for themselves an editorial dwelling in those exalted regions. One of the American journals has, since that article appeared, not only claimed for itself a life in those "higher walks," but claims that it alone is entitled to such a position; and that those who are so rash as to differ from it in its views and course must, from that cause, descend to a lower plane.

The journal taking this position for itself is the Medical News, of Philadelphia.

Every one remembers the fact that, in the latter part of 1882, the News published the results of analyses, made by its "Commission," of the quinine pills manufactured by several of the largest pharmaceutical houses in this country—and every one remembers the additional fact that, in publishing these results, the News claimed that such Houses as "W. H. Schieffelin & Co.," "McKesson & Robbins," "Parke, Davis & Co.," and "Wm. R. Warner & Co.," were selling quinine pills which did not contain the amount of quinine represented on the labels.

Every journalist certainly read that remarkable statement of the News with care; but every journalist who knows anything of analytical chemistry knew that so much very bad and unpardonable work is done by those claiming to be expert chemical analysts, that it was deemed only just, to those whose commercial honesty and pharmaceutical accuracy were thus assailed to wait for established facts, and then to be governed accordingly.

That there was any weakness, or injustice, or corruption, or cowardice, or venality in such a course was never supposed to be possible in the minds of just men, and and it is only since the Medical News makes such a suggestion in regard to the American Medical Press, that any one of respectability has even heard of such an idea. In its issue of August 25th, 1883, the News publishes the following editorial remarks on this subject: "When, last December, the Medical News published the results of its analysis of certain leading brands of quinine pills, we observed, without any special surprise, that little, if any, notice was taken by our contemporaries of the rather startling results, in spite of the importance to the profession and the public of the fact that this dominant pharmaceutical product seems to be very largely manufactured of short weight.

"We say that we were not surprised, for we were advised that some manufacturing houses, whose wares had failed to come up to the standard, and whose advertising patronage was large and influential, had issued requests (perhaps we might rather say commands) that the investigations of the News Commision should be sneered at or suppressed, under threat of withdrawal of advertising. Our information came from sources which we could not discredit, and though we were unable to obtain copies of the letters in question, we could not disbelieve their existence, humiliating though the fact might be to professional journalism."

Such is the language which a respectable journal makes against all of the medical journals of this country.

It is not deemed necessary to make any comments upon this wholesale and wanton aspersion of the American Medical Press, for each journal will know what reply to make. It is not deemed necessary, either, to denounce the statements made as unjust and untrue, for the reader will not even wait for the reading of such a denunciation to come promptly, of his own accord, to such a conclusion.

As to the pharmaceutical houses which the News thus charges with having undertaken, first, to defraud the public, and then to bully, or intimidate, or buy, or suborn the Medical Press, they can take care of themselves, and will doubtless do so. It is, however, deemed best to criticise some of the assertions

and suggestions made by the News, and then to turn to something more pleasing, congenial, and profitable.

If the editor of the News had been just, or even polite, or prudent, he would never have denounced, for weakness, or cowardice, or venality, an entire corps of medical journalists, many of them his professional, personal, and editorial seniors; many his superiors, and the majority of them his equals—whether in literary, professional, or moral culture.

If he were fair in judgment and just in dealing with the character of others, he would have certainly assumed that his editorial brethren, before stabbing the fair names and prized reputations of some of the best commercial Houses in the world (and on the mere *ipse dixit* of a junior member of the editorial corps), preferred, in all justice and courtesy, to wait for the vindication which these maligned Houses would most certainly offer.

If, too, the editor of the News had remembered that he never, in his original report, gave the names of those wonderful chemists in his employ who found the quinine pills offered by select Houses "short in weight," he would have understood that the editorial corps had all-sufficient reason for not receiving an anonymous report of the News as medical gospel, and making haste to foolishly proclaim it.

The editor of the News is one of the younger members of the editorial corps, but he must certainly have learned enough, ere this, to know that one of the most asinine acts of which even a callow and suckling editor could be guilty, would be the acceptance of an anonymous report of very difficult chemical analyses. Be it spoken to the credit and praise of the medical editorial corps of this country, that there was not one, even among the babies in the work, who committed so foolish a blunder! There was here, at least, no weakness or cowardice, or venality, but that sound judgment and commonsense which a large editorial corps may be expected to manifest.

Again, after all this foolish denunciation and inexcusable insult manifested toward sterling commercial Houses, and a reputable corpse of editors, what is the present status of this whole question? It can scarcely be believed, yet such is the truth. It is, that the last chemical analysts (in no respect the superiors of their predecessors and, if anything, inferior to some of them) report that they agree with some of their predecessors, and disagree with others! Lame and impotent conclusions! And, what is even more important, some of the best analytical chemists in this country declare that the charge of the quinine pills indicated being below weight is untrue and absolutely unsustained!

The editor of the News thinks that all who agree with him and his employés are exponents of the supreme law, but that those who do not thus agree with him are humiliatingly bought and disgracefully controlled. And this spurious and paltry attempt at journalistic autocracy he expects to go unchallenged, and its representative unscathed.

If any one who deliberately cuts a stick or bludgeon, wherewith to rap the knuckles or heads of others, has his chosen weapon well used upon himself, he should not be surprised, and has only himself to blame.

In the extract quoted from the editorial mentioned, if there is any one charge which is most prominent and offensive, it is that wherein it is alleged, that the fear of the withdrawal of "advertising patronage" caused medical editors to receive "commands" from advertisers as to what they should do, and that, for the reasons given, these "commands" where servilely obeyed; "humiliating though the fact might be to professional journalism."

This means (simply expressed) that the News charges the editorial corps of this country with being controlled and directed by advertising patronage, corruptly bestowed and corruptly received; and that the editors of this country are suborned for corrupt uses and purposes by the advertising public! That editors publish advertisements containing claims known to be false (as in advertisements of quinine pills falsely claimed to be of full weight), but refuse to editorially declare what they believe to be the truth, for fear of suffering pecuniary loss! That they are bought!

It would be degrading to the editorial corps and to the large pharmaceutical Houses of this country to make a defence, or even a reply, to such charges, and they are only cited and recorded here, that they may be duly remembered and appreciated by those accused.

It is fair, however, to demand that a journal making such heinous and disgraceful charges should be, "like Cæsar's wife, not only virtuous, but above suspicion." But what are the facts?

That journal has, for weeks together, carried, for money, in its advertising pages, (and on one of the most conspicuous pages) the advertisement of one of the accused drug Houses; for carrying whose advertisement it denounces the medical press! And the editor of that journal has not only declared repeatedly since, and declares now, that these pills, advertised in his journal, are not what they are represented to be! That they are "short weight," or that they are fraudulent! That journal, in other words, carries, for money, an advertisement for wares which the journal alleges to be fraudulent in weight and character! It disseminates what it asserts to be false and untrue, because it is paid for so doing! Is that true mortality, or transparent sham? And is the representative of this sham the missionary who is to preach the gospel of journalistic character and purity?

It may be said that the advertising department is owned by the publishers and controlled by them, and that the editor does not and cannot control it. This is all true. As a general rule, any one paid to edit a journal is responsible for the text pages, and not for the advertisements or for their character; but when a question of truth and principle is involved, can he honestly take refuge behind so paltry a plea? Is he to continue as an editor, can he continue to be the editor, with any self-respect remaining, when there is carried, for money, in one department of his journal what he editorially declares to be false and untrue? Editors paid for editing a journal should be held as strictly responsible for the character of the advertising department, as they are for that of the text; and it is mere cowardice—evasion—for any editor to take refuge under any such plea. He has his recourse; it is to withdraw, if what he declares to be untrue, and believes to be untrue, is yet, for money, issued as an advertisement as genuine and true. If under such circumstances, such facts, indeed, an editor is thus repudiated by his own journal, he has but one course which manhood

and propriety demand; it is to withdraw from a journal in whose advertising department he is made impotent and ridiculous. But if he does not resign he should, at least, never charge that other editors carry, for money, advertisements which they believe to be unreliable and untrue!

In conclusion, it may be stated, and should be stated, that the Medical News, of Philadelphia, is the only journal in this country which has advertised quinine pills believed by the journal advertising them to be deficient in weight and defective in quality. Whether under such very peculiar circumstances, its editor is a proper missionary to convert the editorial corps from its alleged sins, or an appropriate apostle in behalf of journalistic morale, is left for the profession to determine.

NOTE.—As long as pill-making by hand, or by the best machinery, must be so far imperfect, as to fail to secure a mathematically correct distribution of the pill elements throughout the mass, so long must some of the pills be deficient in weight and some of over-weight in their medicinal strength. And so long as the best buyers of quinine, by analyzed samples, must occasionally receive quinine not up to the sample's standard (a fact inseparable from commercial intercourse), so long will quinine pills occasionally contain traces of other cinchona alkaloids. But to contend, because some quinine pills are of short weight, and because traces of other alkaloids are occasionally found, that the makers of these pills have forfeited confidence, is really to evince, not only an absolute want of justice, knowledge, and fairness, but a want of familiarity with the subject, and want of common sense.

The analyses of the quinine pills mentioned by the News have been triumphant vindications of these pills and of their makers, and have produced a confidence as welcome as it is remunerative.

Beri-Beri in Japan.—The following review is translated by Baron Ferdinand von Mueller, K. C. M. G., M. D., Ph. D., of Melbourne, Australia.

In Virchow's "Archiv für Pathologische Anatomie und Physiologie," Vol. LXXI., Part 3, appeared an essay by Dr. A. Wernich, entitled, "Klinische Untersuchungen über die Japanesische Varietät der Beri-beri Krankheit." This important treatise became reviewed in the "Klinische Wochenschrift" of Berlin, 1878, p. 497; and it may be of some interest to add a translation of that review to the account given by Drs. Suzuki and Toyozumi, as specially written by them for the Medical Society of Victoria, the review above alluded to bringing the main results of Dr. Wernich's special observations under notice.

The Japanese variety of the much discussed disease which, under the name of beri-beri, occurs on many of the islands and coasts of Asia, as well as of South America and Australia, became the object of discussion from Dr. Wernich's personal observations. His writing treats the symptomatology in an almost exhaustive manner, and deserves, as the first essay on the subject based on newer views and resources in medicine, particular attention.

The disease either runs a quick course under the features of severe disturbances of nutrition, accompanied by œdematous and frequently also paralytic affections, or it may pass on in a protracted manner. In Japan the disease shows itself during spring and summer, and seizes mostly on male natives, particularly young and middle-aged men, whereas females, children and aged persons are rarely attacked. There the malady is also known as kak'ke, and developes in various forms. The acute form commences suddenly with weakness of the legs and frequent vomiting; palpitations, objective and subjectjective dyspnœa follow, caused by serous exudations into the pleural cavity and the pericardium; œdema arises in the face and in other parts of the body, and death takes place in two or three days, or even earlier. A second form of the disease runs on with less severe symptoms, and terminates gradually in recovery. Among the most frequent types of the beri-beri can by comprehended hydropic-marasmic affections.

While these were analyzed by the author, he obtained an insight into the whole variability of the disease, and got a clue to the alteration in the organs of circulation. The latter become in a high degree affected, so much so that their changes had already struck former observers, without a correct interpretation being arrived at. The blood-corpuscles are found to be smaller than in their normal state, and they lack the power of forming rows, indicative of a blood poor in serum, and insufficiently regenerated by new elements. The circulation in the veins proved tardy, while the sphygmographic examination of the arteries offered important characteristics, which the author explained on numerous tables of curvatures. Thus it is shown that the pulse-curve very straightly ascends, forming with the first part of the descension-line an acute triangle, while the second part becomes strongly dicrotic; therefore within various modifications, the angle assumes forms which indicate laxness, want of resistance, and imperfect elasticity of the arterial tubes. Further observations did prove that the just mentioned abnormalities of the pulse curve can be found to a small extent also in numerous anæmic individuals in Japan, that such can last through several years unaltered, that during the kak'ke season this curve in slight cases of illness becomes changed, but in severe cases assumes the above defined form. While re-convalesence goes on, the curve approaches very gradually to the normal one, and just as gradually the blood ceases to be abnormal. As regards the heart no inflammatory processes were observed by the author; the peculiar systolic as well as the rarer diastolic sounds are to be regarded as caused by the anæmic state of the patient. All the other symptoms, such as the marked decrease of the urine, the strong development of hydrops anasarca, as well as ascites, hydrothorax and hydrops pericardii, with the appearances caused by them, further the giddiness, insomnia, cephalagia; furthermore, the characteristic decrease of sensibility, which proceeds from the lower extremities upwards. and which is accompanied by paraplegic affections of a peculiar progress, all these symptoms find their explanation according to Dr. Wernich, readily in the decomposition of the blood, and in that want of energy of the vascular system which leads to hydropic effusions. and which manifests itself also in the cerebral and spinal organs and thus causes the nervous symptoms. A small number of post-mortem examinations, instituted by Dr. Wernich, as well as a critical investigation of published

results of necroscopic obductions have demonstrated, that besides the hydropic affections and the serous exudations, which in the spinal cord may reach even to mollification, no essential or inflammatory changes take place in any organs, above all not in the kidneys nor heart.

In reference to the strange subjective feeling of illness at the outset of the disease and to the fever, which latter accompanies it frequently but not always, we are to remark that the height of temperature is very changeable. The mortality from beriberi amounted in India to 29 per cent., but in the beginning of epidemic exacerbations to even 40 per cent. In the Japanese variety of the disease it came during the worst months to 15 per cent., but over the whole year to not fully 8 per cent. The nature of the malady is sought by the author in a decomposition of the blood, through which the serum loses its faculty to maintain itself in the organs of circulation. whereby partly the strong hydropic effusion and partly the abnormal quality of the remaining blood are caused. As far as the ætiology of the disease is concerned, Dr. Wernich thinks that the mode of living predisposes to it, notably the want of sufficient fatty and albuminous aliments, that the moist-warm climate of Japan impairs nutrition also, and that increased exertion, whether bodily or mental, augment the indisposition to a real disease. It is not necessary to assume as the cause of the beri-beri an infecting miasma. The author places this morbus, as he explained in another journal (Deutsches Archiv. für Klinische Medicin, vol. xxi., part 1), with pernicious anæmia, chlorosis and scorbutus in so far together, as all these arise from disturbed nutrition, which for long periods may be latent, but by increased tax on the system leads to cachexia, with frequent exitus lethalis.

When Staff-surgeon Suzuki and Assistant-surgeon Toyozumi were reading over to me their rough notes on the Beri-beri, I at once remarked, that the origin of the disease seemed to me malarial. This view may be quite reconcilable to Dr. Wernich's thoughts, inasmuch as ill-nourished individuals would be all the more susceptible to the inroads of those subtile organisms which, as we now know, are concomitant to miasmatic fevers. How bacteria have evaded the most vigilant searches of pathologists through long times has more recently been evinced by Dr. Koch's discovery of the bacillus connected with tubercular phthisis. The sudden outbreak of the beri-beri in the hot season, and the occasionally great vehemence of its appearance, would speak for the presence of one of those infectious organisms, which only the most perfect microscopes and the most careful chemical manipulation can lay free to view. Indeed, cholera Asiatica, pestis nigra, synochus icterodes, hydrophobia, and some other dreadful diseases, the causes of which are yet more or less involved in obscurity, can in our present state of science be only assumed to send forth their deadliness through myriads of organic beings, as marvelous in their minuteness as in the rapidity of their multiplication, but doubtless destined to become subdued by the advancing strides of rational medicine.

Analyses of Coated Quinine Pills.

New Remedies, for November, gives the following synopsis of a valuable paper by Virgil Coblenz, of Springfield, Ohio, read at the recent meeting of the American Pharmaceutical Association by Professor Remington, of Philadelphia. The author had analyzed the sugar-coated and gelatin-coated pills of the various manufacturers, and gave his results and analytical processes in full. The names of the manufacturers were not given, but it was stated that none of the houses of good standing were detected in adulterating or withholding sulphate of quinine.

The process employed for extraction of the alkaloid was that of Mr. Henry Maclagan, and the quinine in the residue was estimated by the method of De Vrij.* The quinine alkaloid thus determined was calculated to sulphate of quinine containing 16.18 per cent., or eight molecules of water of crystallization $[(C_{20}H_{24}N_2O_2)_2H_2SO_4.8H_2O]$. The results were presented in tabular form, containing a very large number of figures, from which the following abstract was made, presenting the principal results:

No. of sample.	Coating.	Total sulph. of quinine calculated from herapathite.				Other alkaloids, per cent. calc. on basis of quinine.
		1-grain Pills.	2-grain Pills.	3-grain Pills.	4-grain Pills.	
1	comp.	0.905	2.051	3.048		1.2
2	sug. c.	0.995	2.113	3.026		1.9
3	"	0.925	2.012	3.039		3.1
4	"	1.020	2.044	3.048		2.8
5	"	1.086	2.051	2.998		4.6
6	"	0.974	2.006	2.973		3.4
7	"	0.801	1.655	2.422		11.7
8	"	0.996	2.009	3.055		2.9
9	"	1.008	2.051	3.014	5.007	2.1
10	gel. c.	0.959	1.932	2.908	4.842	3.2
11	"	0.995	1.999	2.989	4.954	2.7
12	"	0.991	1.994	3.039	4.974	3.3
13	"	0.971	1.971	2.939	4.821	4.4
14	"	0.977	1.968	2.963	4.904	5.1
15	sug. c.	0.390	1.142	1.201		36.9
16	"	0.698	1.623	2.160		8.2
17	"	0.884	2.005	2.901		6.2
18	"	0.374	1.501	2.309	3.943	31.1
19†			1.962			6.39

* Pharm. Journ. Trans., 1, xi., p. 448.

† This is a lot of 2-grain quinine pills made by the writer from Powers & Weightman's quinine.

In the discussion which followed, Mr. H. B. Parsons stated that the composition of all remedies capable of accurate analysis was a proper and legitimate subject for investigation. Great care should be taken to do such work thoroughly and impartially, and neither less nor more should be demanded of manufacturers than strict justice requires.

In regard to allowing the manufacturers the benefit of the extra molecule of water in sulphate of quinine, he did not think that the composition of the commercial salt warranted such allowance. He had found, by the examination of nearly one thousand samples, that this extreme limit of 16.18 per cent. of crystal water was reached in only a very few cases—perhaps not more than three or four. He believed that calculation of results to sulphate of quinine containing 14.45 per cent. of crystal water (seven molecules) was perfectly just, and probably in accordance with the real composition of the salt when free from adhering moisture. It was noticeable that the quinine of some manufacturers ran very closely to these figures for moisture, while other brands contained uniformly less moisture (usually between six and seven molecules), and that of still other makers was very variable in this respect.

The process of DeVrij for separation of quinine from the other alkaloids of cinchona bark, was stated to lead to very untrustworthy results, unless applied with the most scrupulous attention to details. A large amount of practice was necessary before the analyst could be justified in publishing results based on this method. Thus a sample of dried sulphate of quinine, of high grade, gave 99.65 and 99.67 per cent. of pure sulphate of quinine on duplicate determinations where great attention was paid to every detail of the process, but slight variations in quantities and manipulations, gave widely-differing results.

In the third place, it was stated that because the determination of the quinine as herapathite by De Vrij's method failed to give results as high as those obtained by evaporation of the ethereal solution, it did not of necessity follow that "foreign alkaloids," or, in fact, any other alkaloids, were present.

It was frequently the case that glucose or other substances contained in the pills was extracted together with the quinine, and, if colorless, were not suspected, and so weighed and reported as "foreign alkaloids." The analyst was bound to support any charges as to admixture of other alkaloids by indisputable evidence—he must separate and identify such alkaloids beyond peradventure. A loose determination by difference was not allowable in cases where the honesty of the manufacturer was on trial.

Professor Prescott stated that Liebig's ether-test for sulphate of quinine was the one prescribed by the U. S. Pharmacopœia of 1870, while Kerner's ammonia test was the one contained in the German Pharmacopœia, editions of 1872 and 1882, and in our present U. S. Pharmacopœia of 1880. This test has withstood severe criticism, and such men as Kerner, Flückiger, Hager and Hesse had indorsed it after thorough trial.

In known mixtures of pure sulphate of quinine with other cinchona alkaloids, it would invariably lead to detection of the cheaper alkaloids. It had been suggested that if these salts were crystallized with the quinine sulphate they could not be as readily detected, but this seemed very doubtful, because the test was applied to an aqueous solution in which both alkaloids were present.

The manufacturers are bound by pharmacopœial tests, and no others. It was, therefore, wrong to require greater purity in the sulphate of quinine used in pills than was demanded of the salt itself. De Vrij's process might very properly be used for scientific investigations, but the pharmacopœial tests were the only ones by which manufacturers should be judged. There are two things which the analyst is in honor bound to do, viz.:

First, to extract all the alkaloid from the pills and weigh it in a state of purity.

Second, to apply the pharmacopœial tests to this alkaloidal residue.

We have in the pharmacopœia of 1880, p. 277, an accurate method of testing adapted to the case in hand. It is obvious that if the proper amount of alkaloid is extracted and weighed in a state free from non-alkaloidal substances, and if the residue thus obtained meets the test requirements of the pharmacopœia, no more can justly be asked of the manufacturers.

Dr. B. F. Davenport, of Boston, stated that in his capacity as analyst to the Massachusetts State Board of Health he had always applied the pharmacopœial tests, and had been governed by them in drawing conclusions in cases of supposed adulterations.

Notes on Indigestion.

In a paper read before the South Midland Branch of the British Medical Association at Wellingborough, Dr. Bryan, F. R. C. S., gives some notes on indigestion which he bases on a practice of fifty years. He insists on the necessity of an avoidance of the cause as the first step in treatment. The affection most commonly has its origin between the ages of 20 and 45 and is chiefly due to indigestible food, quick eating, lack of proper repose after meals, the drinking of too much fluid, constipation and immoderate smoking. It is a symptom of one or all of the following pathological conditions: 1. Impaired organic power of the stomach. 2. A deficient or disordered state of the gastric juice. 3. Impaired absorbing power of the stomach. The discovery of the exciting cause must be the first step in treatment, and when found it must, of course be removed. A soluble condition of the bowels is all essential, and to secure this Dr. Bryan has been in the habit of giving laxative mineral waters (Carlsbad), confection of senna, etc. Latterly he has discovered in Cascara Cordial a preparation which is very efficient and pleasant to take.

The condition of the associated viscera will be found to influence the condition of the stomach, and the liver, pancreas, duodenum, etc., must have attention.

The more acute and sudden attacks of indigestion are generally consequent on some manifest cause, but the irritative states of dyspepsia are more common in the male than the female, and are by no means uncommon in this country in hot seasons, and even in very cold weather, and affect chiefly sanguine and bilious temperaments; they are more commonly occasioned by the use of stimulants, highly-seasoned food, by stimulating medicine, by hot spices, pickles, Cayenne pepper, etc.

With regard to food and drink: tea, coffee, cocoa, and all hot and sweet beverages, must be entirely banished from the dietary, and sherry also placed under the ban. Sound claret and water, or milk mixed with some alkaline effervescing water, are the safest beverages. Much fluid is hurtful. The principal meal should be taken early in the day, before the nervous system has been exhausted by nervous or bodily exertion. Strychnia is of value but it should never be given in the form of pill. For loss of appetite: 5 grains of carb. of ammonia, 15 grains bicarbonate of potash, 1½ oz. of infusion of chiretta, three times a day. For rotten egg eructations: charcoal biscuits and creosote pills, or carbolic acid, are useful.

In all cases of chronic dyspepsia—hygienic treatment, moderate exercise, regular hours, ventilated rooms, and change of air and scene, of extreme importance. The use of narcotics, and alcoholics in excess, must be abandoned. Should take only a small quantity of food at a time; and drinking large quantities of water must be abolished, particularly at dinner.

Heartburn is best treated by rhubarb and magnesia and carbonate of ammonia, blue pill, alkaline solutions in bitter infusions or in lime water; charcoal; and when attended with rancid eructations, by aromatic mineral, sulphuric acid, or nitrohydrochloric, in suitable tonic infusions.

As to the time of eating: In general, five or six

hours should elapse between one meal and another, and the meals regulated according to the necessary occupations and habits of the individual. As a general rule, breakfast about half an hour after rising; and from five to six hours afterwards, dinner; and the most suitable time is about two o'clock for the latter. When dinner is late, tea or coffee should be taken merely as a diluent.

Water is the safest drink according to thirst; fermented wines, liquors, etc., require restriction; of all drinks, spirituous liquors are the most injurious, and Dr. B. Richardson recommends none to be taken without food. In my own opinion and experience, weak brandy-and-water may be allowed, ½ oz. three times a day.

Of diet and regiment (with reference to different states of dyspepsia) Dr. A. Todd observed that during the asthenic form, the quantity of food should be reduced to the power of disposing of it: a spare diet of animal food, and restricted use of fluids; a bulky meal should always be avoided—should cease eating before the appetite is allayed. Take tea or coffee at breakfast, with very little milk and sugar; let very little butter be used; and an egg lightly boiled. Dinner should consist of lean animal food, particularly mutton (game and venison), which ought to be roasted or boiled; rice mixed with the gravy of the meat. Young cabbage or greens, Brussels sprouts, cauliflowers, or French beans allowed. The wines best suited for indigestion are old dry sherry and the finer kinds of claret diluted with water.

A New Treatment of Cancer.

Prof. Nussbaum, whose name is very familiar to the profession in connection with his method of treating ulcers, discusses a new treatment of cancer in the Muenchen Med. Woch., a translation of which appears in the Physician and Surgeon. After enumerating the unsuccessful attempts at preventing the development of cancerous tumors by ligating the main artery supplying the part, or by injecting various remedies into the parenchyma of the tumor, or around it, and the frequency of their recurrence after extirpation with the knife, he proposes his new method. He had noticed, in connection with his plan of treating indolent ulcers of the leg, that when an incision was made around them about a finger's width from their margin down to the fascia, the incision being prevented from healing, improvement rapidly set in. He now proposes a treatment essentially similar for cancer. Not long ago he treated a case of cancer of the mamma, with so strong a tendency to hemorrhage that each dressing of the ulcer threatened the woman's life. As the patient was nearly moribund from the frequent loss of blood, he surrounded the tumor with a strong subcutaneous ligature, which he drew together with all his strength and then tied. The result was not only an arrest of the hemorrhage and a speedy rally of the patient, but a constant decrease of the tumor to one-quarter of its size, when the ulcer began to cicatrize. He now proposes to prevent the feeding of these tumors by their peripheral nutrient vessels in the manner indicated. The blood which supplies the tumor through its base, while it does not absolutely starve it, is, however, sufficient to keep it stationary. In order to accomplish the desired interruption of the blood supply from the periphery, he urges the formation of a furrow around the tumor down to the fascia, about one centimetre wide, made by means of a thermo-cautery.

In the case above referred to a tubercle had not been included in the ligature. Nine months after the application of the ligature the tubercle had grown and had thus reached the tumor of the mammæ, which latter had meanwhile become quite solid. He treated the new growth by surrounding all the isolated tubercles with the deep furrow spoken of, and in six weeks had the satisfaction of seeing all the tubercles shrink in size. Nussbaum thinks the thermo-cautery, or actual cautery, is much more useful than is generally believed. The subject of the condition of the patient, his strength and appetite are much better after an operation with a cautery than with a knife. The wound heals more quickly, except in cases where approximation by sutures can be employed after the operation by the knife. The superior advantages of the cautery are referred to the absence of loss of blood, and to the fact that the nerves and blood vessels, being covered with a cicatrix, are protected from the influence of the air.

Boro-Glyceride.

This new antiseptic compound has already come to be quite highly esteemed. It has very decided antiputrefactive properties. An ounce of it having been added to a quart of fresh cream the mixture was sent from London to Zanzibar, passing through the tropics and arriving at its destination in good condition. The compound, although indicated, from its antiseptic properties, as a valuable surgical dressing, has not as yet been used to any considerable extent for this purpose, its principal use having been in pharmacy, where it is employed for the purpose of keeping infusions, decoctions and solutions of the alkaloids from spoiling. It is suggested, furthermore, as an excellent means of preserving anatomical specimens.

Boro-glyceride is prepared by heating 92 parts of pure glycerine to about 300°F. with 62 parts of boracic acid, which latter should be powdered to facilitate the reaction, and should be gradually added. Steam is given off owing to the water which is formed and set free. The operation, for quantities of five pounds or more, requires about a day to complete, as the viscidity of the melted mass allows the steam to bubble out very slowly. It is known to be finished when it ceases to lose weight and dissolves freely in water at ordinary temperatures. The water given off amounts to a little over one-third of the whole mixture, or 54 parts in 154, the yield being 100 parts for each 92 parts of glycerine employed. As thus prepared boro-glyceride is solid, brittle and transparent when cold, of a light amber color and shining fracture. It is freely soluble in water, sparingly so in cold alcohol. It is insoluble in ether and chloroform at ordinary temperatures. The alcoholic solution will probably be found an excellent means of impregnating absorbent cotton with boro-glyceride for surgical use.

A patent has been issued at Washington for a preparation known under the name of "Barff's Preserving Compound," which is nothing more nor less than boro-glyceride. Whether or not the use of

boro-glyceride would be an infringement of the patent covering this compound we are not in position to state. If the point is ever raised, and it should be decided as an infringement, the case will but be another illustration of the hardships which medicine is obliged to suffer under the abuse of the patent law.

Cholera: a New Method of Treatment.

In view of the possible, although fortunately at this writing not probable, importation of cholera to these shores from the epidemic which has been decimating Egypt during the past summer, it will behoove the profession to be familiar with the different methods of treatment which have been recommended by those whose experience or study has qualified them for an opinion on this point. We, therefore, give the following summary of a new method communicated by Henry Cumberland Taylor, L. R. C. P., to a late number of the British Medical Journal. Dr. Taylor's method has the disadvantage of not being based upon clinical experience, but is a deduction from certain well-known pathological conditions in cholera. After discussing the pathological conditions upon which his therapeutic method is based, he proceeds to give the latter. It consists in injecting the active principle of bile (bilin), which is derived from the crude secretion by a chemical process which is described later on. It is this bilin which is restored to the blood by the lacteal vessels, and from this fact we may conclude that the injection into one of the veins of the arm will not cause bad results if precautions be taken against the introduction of air. He would introduce bilin into the blood for two reasons: 1st., persons attacked by jaundice suffer from an excessive fluidity of the blood, and experience great difficulty in arrest-blood which flows from a slight cut or contusion; 2d., bile hinders decomposition. The absence of bile from the blood is the cause of the thick, clotty state of that fluid during life and decomposition of matters present in the intestines.

The method for preparing bilin from ox bile is given as follows: First remove the fat from the bile by the addition of ether, which dissolves it out. After decantation of the ethereal solution of fat, the residue is treated with acetate of lead to form the tauro-cholate of lead. After filtration this precipitate is suspended in water, through which sulphurreted hydrogen gas is passed. From this deposit of sulphide of lead is obtained what tauro-cholic acid (bilin) is left in solution. After another filtration the solution of tauro-cholic is subjected to the action of carbonate of soda, thus forming tauro-cholate of soda, which is the best preparation for injection. The salt should be purified by crystallization. The quantity employed in the 24 hours should be 100 grammes (3 ounces) dissolved in a litre of water at a temperature of the blood (37° centigrade—98.6° Fahrenheit.) This quantity corresponds to the amount of bile usually secreted by the liver.

While the above method has not been put to the test of clinical experience, it will be well to bear it in mind against the contingencies of the future.

Powdered Meat in the Treatment of Phthisis.

The grand desideratum in the treatment of phthisis is nutrition. Any therapeutic measure which fails to embrace this is necessarily a failure, and there are many who hold, and with considerable reason, that nourishment is, by all odds, more valuable in the treatment of consumption than drugs. This being the case one object of treatment would seem to be the introduction into the system, not only of food, but of such food as may be readily assimilated. As a result of various experiments M. De Bove, in the Gazette Hebdom., declares in favor of powdered meat given in the following form: two soupspoonfuls of the powdered meat are stirred with cold water in a bowl, until the meat seems to be thoroughly dissolved. Two spoonfuls of syrup and an equal amount of some liqueur are then added—curacao, chartreuse or kirch, for example. Dujardin-Beaumetz endorses this preparation in so far as to say, that when it is given in quantities of six spoonfuls of the powder daily, remarkable results have been produced in the treatment of consumptives. It is obviously necessary in the use of this nutriment that the stomach should not be disturbed through the exhibition of such drugs as may be deemed necessary for the paliation of distressing symptoms.

In this connection we would suggest the substitution of desiccated defibrinated bullocks blood (Sanguis Bovinus Exsiccatus) for the powdered beef. This preparation is essentially dried fluid extract of beef, containing all its constituents with the exception of a small amount of fibrin.

The Antagonism of Strychnia and Prussic Acid.

A correspondent of the British Medical Journal communicates the result of an experiment somewhat accidentally made which tends to establish a degree of antagonism between the action of strychnia and that of prussic acid. In order to destroy an old dog he administered to the animal a large dose of strychnia, in bread. The poison, did not act with that rapidity which he could have wished, and in order to cut short the animal's struggle and pains, which were very distressing to watch, he poured some hydrocyanic acid into the brute's mouth. Instead, however, of witnessing the sudden demise which he expected from this addition of the extremely poisonous agent, he was surprised to behold a sudden improvement in the symptoms of the strychnia poisoning. This improvement was by no means temporary, but continued, and the animal eventually recovered. This happened some years ago, and the matter had almost passed from his memory when he recently discovered that two of his cats has been poisoned. On of them was already dead, and the other was writhing in the pathognomonic spasms due to strychnia poisoning, with dilatation of the pupils and insensibility to light. This latter cat was held firmly, and 3 or 4 drops of hydrocyanic acid were carefully dropped upon its tongue. An improvement was shortly visible. The pupils of the eye became normal, the convulsions became less severe, and in a few hours the cat completely recovered.

There is certainly a curious fact apparent in the results of these crude experiments, and possibly more exact observations might lead to something of real value.

Belladonna in the Treatment of Hay Fever.

The remedies which have been recommended for the cure or temporary alleviation of the symptoms of hay fever, or summer catarrh, the latter being the preferable name, are legion, for they are many. Dr. W. F. Phillips communicates to the British Medical Journal, his experience in the use of belladonna in this affection. This drug is, of course, not a new one in this disease, it having been from time to time employed in the practice of physicians of this country. Dr. Phillips, however, writes of it as if under the belief that he is communicating something new, but regardless of his belief on this point, the case which he reports is of interest. He is led to the use of belladonna through its physiological property of checking the secretions of mucous membranes, a prominent symptom of the catarrh being injection of the conjunctiva and hyperæsthesia of the nasal cavities, and the excessive secretion of tears and mucus. The therapeutical results, based on this adaptation of physiological properties to the pathological conditions were, in the case reported, exceedingly satisfactory.

It is peculiarly true of hay fever that different individuals manifest different degrees of susceptibility to the cause of the trouble and to the remedies administered for its relief. We have seen cases in which belladonna was absolutely useless. It is well, however, to bear in mind that this drug has in it the possibility of benefit in some cases, so that it may be resorted to in obstinate attacks of the disease in patients who are forced by circumstances to remain in locations where they are constantly subjected to the cause.

Hyposulphite of Soda as a Disinfectant.

The inefficacy of disinfectants in allaying the insufferable fetor of cancerous ulcers, has been noted by most practitioners who have had any experience in the treatment of this class of sores. In a case of this kind Dr. W. E. Buck (British Medical Journal) had gone the whole round of disinfectants usually employed for this purpose, but failed to get one which would satisfastorily overcome the smell and keep the ulcer clean. After trying carbolic acid, turpentine, resorcin, creasote, boroglyceride, chloride of zinc, charcoal, etc., in vain, he tried a saturated solution of the hyposulphite of soda added to equal quantity of water. This he found to be exceedingly efficacious. The ulcerated surface was well syringed and washed with the solution and was then covered with rags steeped in the same. The granulations were kept clean and the fetor was well kept under. Most disinfectants seem to loose what virtue they may possess after a few days' application in these cases, but in the case of the hyposulphite of soda the beneficial effect was not abated even after the use of the salt for months. It is cleanly, destitute of smell, does not stain and is very cheap, all of which properties combine to make it a very valuable agent in these very disagreeable cases.

Antidotes to Phosphorus.

Prof. C. W. Wright, of Louisville, according to a recent article in the Druggists' Circular and Chemical Gazette, attributes the poisonous action of phosphorus to its phosphoresence, the destruction of which, he says, makes phosphorus innocuous. He attributes the phosphoresence to the ozone which phosphorus has the property of developing out of the oxygen of the air. Any agent which will destroy, or temporarily suspend this property, is the antidote to phosphorus poisoning. Among the substances which act in this manner are spirits of turpentine and sweet oil, or any liquid fat. A mixture of 10 to 15 drops of the former with an ounce or two of the latter, will, he says, prove an efficient antidote to elementary phosphorus in any substance, such as the tips of matches or certain rat poisons with which it may be incorporated. Other volatile oils, such as oil of sassafras, may be employed when turpentine is not at hand. This theory of the poisonous action of phosphorus, if phosphorus may be said to be poisonous, *per se*, is interesting as well as novel.

Pomade for Eczema of the Face.

M. Galezowski recommends, in Progrés Medicale, the following preparation for those cases of eczematous or impetiginous eruptions which in children often accompany phlyctenular keratitis:

℞ Oil of cade,
Camphor, āā 25 centigrammes.
Red precipitate, 10 centigrammes.
Vaseline, 10 grammes.
Mix.

When numerous crusts are formed it is as well to remove them with a suitable forceps and to cauterize the surface thus uncovered with a light application of nitrate of silver, the excess of which is to be neutralized with a solution of salt.

New Remedies.

An Unobjectionable Laxative Remedy—Cascara Cordial.—Our apothecaries are filled with useless and worthless drugs. The late professor of chemistry in the Jefferson Medical College, B. Howard Rand, endeavored to impress upon his pupils the utter futility of prescribing remedies which time and experience have shown to be without virtue, or have shown to be more potent for evil than good. The indispensable materia medica, he said, embraced about twenty-five articles. As students, many of us felt that his words were words of wisdom; as practitioners, many of us realize that his instruction might profitably be put into practice. And his parting injunction to his class, "Trust in God, and keep your bowels open," has to me frequently had a deep significance. I am confident that if men and women realized how much happiness they miss in failing to comply with such an injunction, they would make haste to obey it, not by the employment of energetic drugs, but by every other means conducive to the end. I have always felt that the profession urgently needed a remedy or remedies which would be certain correctives of constipation—habitual or acute. The remedies in vogue for the treatment of this condition are legion, and it is no Utopian idea that more injury has been wrought by their routine employment than by any other class of agents in the materia medica. The exercise of a due regard for the welfare of those who suffer the ills of constipation would save many individuals much injury. A proper care, also, for one's professional reputation would lead often to a different line of practice; for is it not true that physicians to-day, as nearly as they can, imitate the practice of generations ago? Some even affect a blind faith in the inexcusable blunders of those who have taught that all diseases originating in the liver must be treated with calomel. Every physician knows that colocynth or gamboge or aloes or podophyllin, etc., etc., will produce free intestinal evacuation, but it is too often forgotten in practice that all of these

agents are capable of vast mischief; and I am very confident that in the treatment of habitual constipation with these and similar agents of the materia medica, the last state of the patient is often worse than the first. And here arises the necessity for the employment of anti-constipation remedies, which shall be minus any deleterious action. It is not sufficient that the bowels should be moved with medicine; it is equally important that such action should be followed by no enervating reaction. How many physicians have afforded the relief sought by that large class of people of every community who suffer from the evils of habitual constipation? I could count them on my fingers' ends.

When I was a student at the Jefferson Medical College, Prof. S. D. Gross taught that we should use our influence to have our patrons educate the bowels. "Educate the bowels, gentlemen, educate the bowels," was the injunction of the venerable professor.

It is true that the bowels can be educated, but the care and diligence required to do so, few persons are willing to exercise. Hence, the necessity for the use of so much medicine to maintain this important function in some sort of action. Let us see whether pharmacy has not met the demand of the medical profession for a certain, palatable, painless cathartic remedy. We think it has. In that elegant preparation made by Parke, Davis & Co., known as "cascara cordial," the most fastidious doctor or patient can find just what he wants. It pleases the taste, produces gentle and salutary action of the bowels, is free from the property of griping, and is devoid of any injurious secondary action. In that type of cases where muscular atony is *the* factor in the production of constipation, relief is speedily effected with cascara cordial, and its continued use will produce permanent cure.

In this class of cases—which is large—like in almost every other variety of constipation, a complex condition of things forms the basis of the disorder. Though we designate the condition atony of the bowels, we thereby only express the effect of a chain of morbid processes which involves, perhaps, altered function in many of the important organs of digestion. Disordered glandular secretion, whether from congestion or too little blood, whether from nervous or mechanical influence, accompanies almost every case of habitual constipation. It has been abundantly proven in the experience of others that cascara is a certain remedy for these conditions, and in my own experience this claim has been shown to be well-founded. It is obvious, too, that an agent which will correct these conditions, will exercise a wholesome influence over the functions of digestion. In the order of sequence intestinal torpidity often follows disorders of digestion, and *vice versa;* but in either case cascara cordial will always be found a valuable remedy. This gives it prominence as an anti-dyspeptic remedy. In the treatment of gastric catarrh (so-called dyspepsia), when in combination with other appropriate remedies, it exercises a most beneficial influence. It had been my practice in these cases to prescribe something like the following:

℞ Sodii bicarb.,
Tr. nucis vom.,
Tr. rhei.,
Infus. gent. comp.,

with frequent good results. Recently I have substituted for the rhubarb and gentian, cascara cordial, and I have reason for self-congratulation over the change. Cascara cordial meets the double indication of rhubarb and gentian in a manner more satisfactory than the agents themselves, as the tonic-astringent and resin-bearing principles of cascara sagrada in the highest degree impart tone and vital force to the alimentary canal, while at the same time nutrition is improved, and all the forces of the economy invigorated. This can easily be demonstrated by experimentation upon one's self—as I have done frequently. Its action is so gently stimulating that it becomes almost grateful in its effect. Not only as a remedy for constipation—especially chronic—is it serviceable; but it is invaluable as a vehicle for the administration of other and less palatable drugs. Many officinal preparations are used almost exclusively for such a purpose. The compound liquorice mixture, the aromatic elixir of liquorice, the compound syrup of sarsaparilla, etc., etc., are pleasant and agreeable adjuvants for the administration of many remedies, but not one of them is worthy to hold a place by the side of cascara cordial. It is more agreeable in flavor than any of the preparations mentioned, and has such decided medicinal qualities of its own that I do not much doubt it will, in time, largely supplant them in this use. I cannot now name a disease in which cascara cordial would be contra-indicated. On the other hand, its salutary action on the gastro-intestinal secretions in morbid conditions of whatever character, its healthful action in promoting digestion, stimulating absorption, and improving nutrition generally, marks it for great favor at the hands of the medical profession. In consideration of these properties, I employ it more frequently now as a diluent and vehicle than any other preparation. Its laxative property is no objection (at least I have not found it so) to these uses of the cordial. It must be given with discretion. I usually make the dose a half drachm three times daily. This will be found to exercise no undue action upon the bowels, but to maintain them in a gently soluble state. For purposes of catharsis, I administer it usually in two-drachm doses in the evening. This produces only agreeable action. I have never found it in a single case to produce griping when it was given in reasonable doses. I have myself been subjected to some griping pain from its use in very heroic doses as a matter of experiment, but this is not its normal action.

Only to-day I saw a small volume written by Dr. Joseph F. Edwards, under the title "Constipation Plainly Treated and Relieved Without the Use of Drugs." As intimated before in this paper, it is possible to do this; but the victims of constipation will not make the sacrifices necessary to that end, and in order that they may be saved from the deleterious effects of rasping, grinding, tearing, drastic drugs, it is of paramount importance that the medical profession should endeavor to supplant their use with such a remedy as cascara cordial. It is well known that the careless employment of energetic cathartics will often produce, as a secondary result, retardation of blood in the hemorrhoidal veins, and ultimately piles. Cascara cordial will relieve this condition; indeed, it is useful in the treatment of hemorrhoids. It is unequaled in the chronic forms of constipation which so often afflict chlorotic or dyspeptic females, and also in those women who are given to sedentary habits and have sluggish constitutions. In every condition of chronic constipation (barring, of course, those cases which arise from obstruction) it will be found serviceable.

In one patient afflicted with cardiac dilatation, and subject to attacks of angina, I found it superior to any other agent employed, and these were numerous. The slightest torpidity in the bowels at once aggravated the symptoms of the case, especially the head symptoms, and it became imperative to maintain the intestinal functions in steady action. The only medicine which gave complete satisfaction was cascara cordial. Next to it was a pill composed of compound powder of jalap and blue mass. I gave the cordial in two-teaspoonful doses once daily in the evening at bedtime. This produced a free evacuation the following morning.

I have now under treatment a case of hepatic cirrhosis in which there is or has been obstinate constipation. For its relief I administer cascara cordial. In pregnant women and in lying-in women it is a splendid remedy. I should think that obstetricians would gladly give it a prominent place in their medicine-chests. It is sought for by this class of patients when they are aware of its existence. When a very

prompt action is demanded, cascara must give place to something more energetic. A favorite pill with me for the purpose of prompt catharsis is the following:

℞ Ol. tiglii, gtt. ss.
Elaterin., gr. 1-24.
Atropiæ sulph., gr. 1-80.

This will often produce a free discharge within one hour. It is clear that its indication could not be met with cascara cordial. Except where these potent remedies are required, cascara will meet, I believe, every indication. Comprising in its composition an ingredient which is said to be a very valuable tonic and alterative agent, it derives virtue from this fact, and commends itself for consideration.

I have not used berberis aquifolium, and only know of its properties by published reports, but these would seem sufficient to entitle it to some regard. Assuming that it has the medicinal virtues ascribed to it, it certainly must enhance the therapeutic properties of cascara cordial, in which it forms an ingredient. The carminative aromatics which enter into its composition also exercise a healthful influence upon the processes of digestion. If I were asked to name another preparation equally effective and palatable, I should answer that it does not exist. The physician can assuredly be content with cascara cordial, as its medicinal uses and varied utility and elegance of composition mark it for great favor.—F. C. Herr, M. D., S. W. Hospital, Philadelphia, in *Medical and Surgical Reporter*, October 20 and 27, 1883.

Coca; Its Physiological Properties.—It is a little singular that an agent so long known as coca should have attracted little or no attention in the medical world until a comparatively recent date. This is, perhaps, to some extent due to the fact that when the Spanish first made conquest of Peru, the aborigines and all their customs were treated with the utmost contempt; this was especially the case with regard to coca, which was then, as now, extensively used by the natives—the leaves being chewed as we do tobacco. This habit was denounced by the Spaniards, and the use of coca forbidden among the whites. And hence it has only been after the lapse of centuries that these early prejudices have been gradually overcome and the valuable medicinal properties of the plant begun to be appreciated.

Before speaking of the more important therapeutic uses of coca, it will be interesting and instructive to glance briefly at the history of its employment, and of its physiological properties as developed among the natives of the Andes, along the valleys and slopes of which the shrub grows wild and is also extensively cultivated.

From remote antiquity the Peruvians have been in the habit of chewing the leaves at frequent intervals during periods of repose. So general was the use of this plant, and so common the demand for it, that it formed the usual money or medium of exchange in Peru, just as has been the case with tobacco in the early colonial history of Virginia and in certain provinces of S. W. Africa. At present, all the natives and very many whites use it regularly. It is to the mountain Indian the delight, the support, and in some manner the necessity of his life. Whether climbing the dizzy heights in the pursuit of game or delving in the mine it is his custom to resort, at interval, to his pouch (*chuspa*), from which he takes a few leaves and in a peculiar, methodical manner prepares his *acullico*, or chew, the enjoyment of which seems to impart the most blissful satisfaction. Ordinarily, the native takes from three to four such chews every day. Dr. Weddell, an extensive traveler in Bolivia, places the amount used by one person at from one to one and a half ounces per day, and on holidays twice that quantity.

The coca leaf acts differently according to the method of using it; when made into a tea and drunk, it produces a gentle excitement, followed by wakefulness. If the infusion be somewhat stronger it retards hunger and imparts unusual buoyancy, enabling one who has partaken of it to ascend great heights, carry burdens, or run rapidly without the sense of fatigue or breathlessness. The more gradual absorption of its properties from the quid rolled in the mouth, however, is preferred by the Indian; employed in this way it cheers his heart brightens his mind, and renews his bodily strength for the rigorous tasks of life. In a few instances persons betake themselves to the immediate use of coca and becomes "*coqueros*," which is about equivalent to what we would term a drunkard. When thus abused, the effects of coca are injurious. But Dr. Weddell remarks that he has rarely met with such cases. It would seem that among the natives there is little disposition to run into these wild excesses, and so far from working injury to the system, the effects of coca are in every way healthful and pleasant. Von Tschudi (Travels is Peru, 1838 to 1842—London, 1847) says: "Setting aside all extravagant and visionary notions on the subject, I am clearly of the opinion that the moderate use of coca is not merely innocuous, but that it may even be very conducive to health. In support of this conclusion I may refer to the numerous examples of longevity among Indians who, almost from the age of boyhood, have been in the habit of masticating coca three times a day. Cases are not infrequent of Indians attaining the great age of 130 years, and these men, at the ordinary rate of consumption, must in the course of their lives have chewed not less than 2,700 pounds of the leaf, and yet have retained perfect health."

It is worthy of remark that the Peruvian Indians have always ascribed to it the most extraordinary virtues. Clusius, writing as far back as 1605, says that when he asked them why they used coca, the answer was, that when using it, neither hunger nor thirst annoyed them, while there strength and vigor were confirmed. Other writers, who have had ample opportunities to observe, unite in testifying that coca, moderately consumed, seems to exert extraordinary powers in smoothing over the ordinary vicissitudes of life.

Weddell remarks that while coca seems to sustain the body while fasting, it does not destroy the appetite, for coca-chewers eat heartily when they can get what, in the parlance of the day, would be termed a square meal.

Perhaps no better illustration could be given of the vitalizing and sustaining influence of this remarkable agent than by citing an instance mentioned by Von Tschudi: "A cholo of Huari, named Hatan Huamang, was employed by me in very laborious digging. During the five days and nights he was in my service he never tasted any food, and took only two hours' sleep each night. But at intervals of two and a half or three hours he regularly chewed about half an ounce of coca leaves and he kept an *acullico* continually in his mouth. I was constantly beside him and therefore I had an opportunity of closely observing him. The work for which I had engaged him being finished, he accompanied me on a two days' journey of twenty-three leagues across the level heights. Though on foot, he kept up with the pace of my mule, and halted only for the *chaccar*. On leaving me, he declared he would willingly engage himself again for the same amount of work, and that he would go through it without food, if I would but allow him a sufficient supply of coca. The village priest assured me that this man was sixty-two years of age, and that he had never known him to be ill in his life."

Notwithstanding the early denunciation of Spanish priests, the virtue of the coca leaf held its ground, and by degrees leading churchmen became converts to its daily use. One of the warmest advocates of the plant was the Jesuit Don Antonio Julian, who, in a work entitled "Perla de America," laments that coca is not introduced into Europe instead of tea and coffee. "It is," he observes, "melancholy to reflect that the poor of Europe cannot obtain this preservative against hunger and thirst, and that our

working people are not supported by this strengthening plant in their long continued labors."

In 1793, Dr. Don Pedro Nolasco Crespo urged the issuing of regular rations of coca in the navies of Europe. Von Tschudi has also recommended it as fitted "to afford a nutritious refreshment to seamen in the exercise of their laborious duties, and to counteract the unwholesome effect of salt provisions." And Prof. Schlechtendal, after recommending it as a tonic, soothing, and nutritive—as preventing weakness of the stomach, and the obstructions, colic and hypochondria, to which such weakness gives rise—adds that, "without doubt, the leaves might be usefully employed in Europe." Johnston, in his "Chemistry of Common Life," after noticing all the arguments for and against coca, strongly recommends it in all cases of physical and mental labor.

The chemical properties of the coca leaf, like many other analogous plants, are somewhat complex in their nature. Much of its activity depends upon an alkaloid crystalline principle known as cocaine, or cocaina. But according to those who have devoted most time to its practical study, the peculiar properties of this plant belong partly to cocaina and partly to certain odoriferous resins. Coca contains an essential oil which is exceedingly volatile, and it is for this reason that the leaves speedily lose their high flavor and specific virtue when not carefully preserved. Johnston states that they lose much of their strength after the lapse of a year. It would seem therefore that a properly prepared fluid extract would be more efficient for medical purposes than the alkaloid alone. All depends, however, on the proper curing and handling of the leaves, and the fact that they must be comparatively fresh.

Judging from the authentic physiological history of coca, which we have, we are fully authorized in declaring that, when properly used, even as a masticant, it acts as an excellent nerve tonic—imparting strength to both body and mind—and that it thus contributes to health and longevity. These facts commend it to the medical profession for more extended attention than it has hitherto received. It has been highly lauded as of great service in cases of nervous depression, whether the result of overwork, mental anxiety, sexual excesses, or the abuse of tobacco. It has been spoken of as useful in spermatorrhœa, and in cases of partial impotence. It is as a preventive of nerve-prostration, and as a restorative, that Bartholow confines its most valuable powers, and mentions in this connection that "the celebrated pedestrian Weston, having learned this fact, was detected in the use of coca during one of his extraordinary feats in London." The same author remarks that it is a valuable remedy in the nervous form of sick-headache, migraine, a fact of which the writer has had repeated clinical proof.

I have prescribed coca quite frequently within the last few years and in many instances with most gratifying results. Its property of retarding thirst, while at the same time acting as a cerebral stimulant, renders it a most excellent substitute for ardent spirits, or beer, especially when persons have been indulging too freely and are attempting to break off the habit. It seems to strengthen will-power, by removing that shakiness and mental depression which is none of the incentives with the inebriate to return to his cups. I have also been told by intelligent patients that this drug certainly seems to possess the virtue of contributing to the relief of that longing which at times overtakes the drunkard with such overwhelming force. When administered under such circumstances it promotes a sense of composure which enables the patient to sleep, whereas, when in health, the same dose would aid his faculties in keeping awake.

Coca has been suggested as a uterine tonic in amenorrhœa and in some forms of nervous dysmenorrhœa; of this fact, however, I have not satisfied myself, although I have found it useful in the intense hypochondria which sometimes attends these conditions, and in this way it may prove indirectly beneficial.

The field where this agent is likely to be employed with the best results is with that class of persons, so numerous in these days, who are wearing out under mental and physical strain of a busy life; those who are afflicted with the numerous train of ills incident to exhausted nerves and brains. Under such circumstances I have found coca of signal benefit. It seems to retard destructive metamorphosis and to impart temporary vigor, during which time tired nature has an opportunity to take breath as it were. In order to obtain satisfactory results, however, it is important to administer a good article, as the different extracts vary greatly in strength.—Walter Coles, M. D., in *Weekly Med. Review.*

Jequirity in Granular Lids.—During the past year the attention of oculists has been called to the treatment of this intractable disease by an infusion of jequirity seeds, and the profession is indebted to Dr. DeWecker, of Paris, for first bringing it forward in such a manner as to make its use promising. Conflicting statements, however, have prevented many from using it, and no doubt the very severe effect of its application in many cases has prevented those testing it from giving it a fair trial.

During my vacation this summer I visited Dr. De Wecker's clinique, and there saw many cases in varistages of treatment, his method of applying it and the results, and I was somewhat astonished at each phase of it.

As trachoma is the *bête noire* of our practice in Michigan, I am deeply interested in its effects, and I feel personally under many obligations to Dr. De Wecker. I believe the profession will also for bringing to our notice jequirity.

DeWecker gave me some of the seeds he was using, and instructed me in the manner of using them. Since my return I have used the treatment in twelve eyes, being able to bear him out in most of his statements, so far as a limited number of cases will permit. Besides the seeds he gave me I have used seeds procured from Parke, Davis & Co., chemists, which produced the same effect.

In an article on this subject, DeWecker says in the Annales d' Oculistique for May and June, 1883:

1st. "Incontestably, lotions with the infusion of the seeds of jequirity cause a purulent ophthalmia of croupal character, the intensity of which can be regulated by the number of applications made and the strength of the solution used."

2d. "Incontestably, the cornea runs no risk during the course of jequiritic ophthalmia."

3d. "Incontestably, jequirity ophthalmia cures granulation rapidly."

In support of DeWecker's conclusions, I can say that in each of the cases in which I have used it, I have found the jequiritic ophthalmia assert itself after the first application of a 3 per cent. solution of either a warm or cold infusion.* The degree of its activity varied in different cases, but it was active in all. Some individuals seemed more susceptible to its effects than others. In each case there was the phlegmonous-like swelling of the lids, with headache and fever, and in several of the cases nausea and vomiting. The croupal membrane formed on the conjunctiva, and there was a sero-purulent discharge instead of one distinctively purulent. The immediate effect of each application lasted several hours, and the applications were made three times a day for three days, nine applications in all. The effects were then allowed to subside, simply keeping the eyes clean by bathing the lids several times a day in cold water or borated water.

So much for his first proposition. The second proposition—"the cornea does not run any risk from

*This is the strength commonly used by DeWecker at present, though he sometimes uses a 5 per-cent. solution, closely watching its effects.

its proper use"—would seem to be supported by the following facts:

On my return home, August 17th, I found in St. Mary's Hospital a Mr. C., æt. 73, who had been for about 10 days under the care of my assistant for a large asthenic ulcer of the left cornea. About four-fifths of the cornea was affected and nearly necrosed, and in spite of the usual methods of treating such cases, it was proceeding to the bad very rapidly; in fact, I considered the eye lost. I was about to test jequirity in a case of trachoma which I had treated at various times for a year or more, when I thought the case of corneal ulcer was a good one to test the fact of its danger to the cornea. I made an application to the conjunctival sack and laid a sponge wet with the solution on the lids at noon, and ordered an application that evening and next morning. When I saw him at noon next day—just 24 hours after first dose—there was a high fever, nausea, intense shining œdema of the lids, particularly the upper lid, chemosis and considerable pain when the lids were touched. I stopped the use of the jequirity, and let the patient wash the lids with a solution of boracic acid (about 2 grains to the ounce), and let the jequirity inflammation pass off. The progressive tendency of the ulcer seemed checked, and improvement continued. He was discharged September 4th about well. In another case I used it three times a day for three days in a case of ulcerated trachomatous pannus, with a small prolapse of the iris, and the ulcer disappeared with the pannus inside of 10 days from the time of the use of jequirity.

That corneal trouble may arise, however, and that care must be taken in its use, the following fact shows: A Mr. P., whom I have treated several times during the past year for trachoma, and who has been treated by others for the past three or four years, was placed under the jequirity treatment, a 3-per cent. solution being used. The lower half of the cornea had seemingly never been affected by the trachoma, the upper half had a thin pannus. As the jequiritic inflammation passed off, the lower half of cornea of right eye was seen to be extremely hazed, almost bordering on an abscess of the cornea in appearance, and looked as if desquamation might take place. It did not, however, and the cornea slowly cleared up. The left eye took the same peculiar course, only perhaps in a severer form, the keratitis being well marked, and was followed by a small but rather deep ulcer, which, without special treatment, has slowly got well, leaving a thin leucoma.

With regard to the third proposition, "It cures granulations rapidly:" I have been astonished at the marked effects I have seen in three weeks as a result of three days' treatment. I have never seen equal results from three months' treatmrnt of similar cases by any of the usual methods. I think, however, the best results will follow its use in those cases of diffuse thickening of the entire palpebral conjunctiva, without the isolated trachomatous bodies; those which seem to be a general lymph-like infiltration with trachomatous bodies in the ocular conjunctiva and possibly in the cornea. In my experience, thus far these are the cases most benefited.

As to its application, I saw DeWecker use a small sponge, with which he made an application to the everted lids, and had the sponge, wet with the infusion, applied to the lids, externally, for five or ten minutes. These applications were made three times a day for three days (nine applications in all). After trying this method I substituted absorbent cotton for the sponge, and I think its use much pleasanter. I find, in order to get the desired effect, it is well (if the swelling of the lids does not prevent) to evert the lids at least the first three or four times of its application and with a bit of dry absorbent cotton wipe off gently the diphtheritic exudation before applying the lotion. Care must be taken that the sero-purulent discharge does not get into the unaffected eye, as it well set up a similar inflammation and greatly increase the patient's discomfort. Owing to the severity of its constitutional effect when applied to one eye, it is advisable to treat but one eye at a time. After the severe symptoms pass of, which will be in four or five days, the other eye may be treated. The tendency to posterior symblepharon should be combated by separating the agglutination with a probe.—Prof. Eugene Smith, M. D., Detroit, in *Journal of the American Medical Association*, Sept. 22, 1883.

The Jequirity Treatment of Granular Lids.—Although the use of jequirity or abrus precatorius, is comparatively new, enough has already been written concerning it to make its effects familiar even to those not especially interested in ophthalmological literature.

It will be remembered that it was recommended by De Wecker for the treatment of granular lids, especially those complicated with pannus. An infusion of the bean, when applied to the conjunctiva, was found to produce a severe inflammation of a diphtheritic nature, but when this subsided, it left the cornea clearer than before, and the granulations much smaller, if, indeed, they had not entirely disappeared. It had been known for a long time that the conjunctiva could be inoculated in a similar manner with gonorrhœal pus, and sometimes a favorable result obtained, but unfortunately the degree of inflammation could not be regulated, and frequently, instead of improving the original condition, the eye was thereby lost.

It was, therefore, a valuable discovery, when an agent was found to have all the advantages of that method of treatment, but free from most, if not all of its dangers. The usual tendency is always to overestimate the efficacy of a new drug, but the results thus far obtained place one important fact beyond doubt, this is, that jequirity is among the best agents at our command for treating certain aggravated forms of granular conjunctivitis, in selected cases even ranking above copper sulphate or silver nitrate. The clinical observations in support of this statement are already too numerous to warrant any account being given here of the ordinary experience with the drug. It may simply be remarked that I have thus far given the drug a fair trial in nine cases. Three of these were more improved by its use in about sixteen days than by application of sulphate of copper for nearly two months. In two, the improvement was also very decided, but it was necessary to induce the peculiar inflammation a second or third time. In two, it did absolutely no good. Finally, two others remain still under treatment, one of which is improving, and the other with no prospect of it. Or, to recapitulate: the results in three cases may be called very successful; in two, moderately good; in two, a complete failure, and in two, doubtful. I am aware that the data furnished by so few cases are not sufficient from which to draw any valuable conclusions as to the general plan of treatment, but the observations thus far made are certainly sufficient to warrant my calling attention to one or two facts regarding the use of the bean which writers have barely mentioned or entirely ignored.

The first of these relates to the freshness of the bean. Wecker laid some stress upon this point in one of his first articles, and attributed the failure of the treatment in the hands of others as perhaps due to their using old or dried beans. The importance of the observation is at least substantiated by my experience with the drug. The first beans which I used were obtained in June last, from Boston. An infusion of these, of two and one-half per cent., gave absolutely no results. One of five per cent. produced a moderate conjunctivitis, and finally a solution twice as strong was necessary to cause the effects usually described. Moreover, this occurred in only two eyes, out of the four on which it was then tried. Had I rested at that point and ventured to draw conclusions, they would have been rather unfavorable to the drug. Fortunately, however, I sent to another dealer, paying him rather a large price for a very small

package of the beans. These were a brighter red than the first, but otherwise quite the same, to all appearances. On trying a two and one-half per cent. infusion on one of the eyes, which before was unaffected, I found the characteristic inflammation made its appearance before the third day, and an infusion twice as strong was sufficient to bring out the typical diphtheritic deposit and swelling of lids and face. This was produced in each of the four cases already mentioned, and still a fifth, subjected to the treatment for the first time. Of these five, two then complained, in addition, of very decided vertigo, and one was not only confined to her bed in the hospital for two days, but also had hallucinations similar to those which occasionally accompany the use of an opiate. The difference in the action of these two specimens of the drug is sufficient to warrant some care in its selection.

A second point to which I would call attention is the diminishing effect of the same infusion, when used for a length of time. I noticed this particularly when experimenting with jequirity on the eyes of rabbits. For example, a two and one-half or five per cent. solution, even of the stale beans, would set up a conjunctivitis (but not of diphtheritic nature), which would reach a maximum degree about the end of the second or beginning of the third day, and gradually subside, in spite of the continuance of the applications, although it would not entirely disappear. If a fresh infusion of the same beans was then used, more acute symptoms would again supervene. The same variations I have witnessed in the human subject. I am frank to say that usually, when the degree of inflammation has been very severe, I dared not continue the jequirity simply to determine how much the eye would still tolerate. In the case of an old man, however, with a very thick pannus, and granulations of several years' standing, I used a five per cent. solution, till the diphtheritic deposit, pain and swelling, was produced; but these symptoms gradually subsided, and in the course of two weeks almost entirely disappeared, although applications were continued three times a day.

The natural inference from this is, that the infusion deteriorates quite rapidly, and although I am told that at one large infirmary in this country, only fresh infusions are used, still I do not think this fact has received the attention in the literature, which its importance demands.*

The third point to which I would call attention is the effect of jequirity infusion upon the cornea. De Wecker insists that this structure is not endangered by its use, and I am only aware of one writer who has allowed this statement to pass unchallenged. My experience, however, would lead me to think that the cornea is by no means free from danger by this method of treatment. In two cases I have seen an ulcer form even when the degree of inflammation otherwise was not in a very great degree. As soon as the applications were withheld, and atropine used, the healing of the ulcers soon began, but without doubt they were due to the jequirity treatment.

Although such ulcerations may be small and superficial, and although they may be rare, still, one such observation is sufficient to make the surgeon cautious in receiving the statement that "the cornea runs no risk during the development of jequirity ophthalmia."

These three facts concerning the use of the drug seem to be of so much importance as to be worthy of special attention by those who avail themselves of its undoubted advantages.—Dr. Lucien Howe in *Buffalo Medical and Surgical Journal*, October, 1883.

Cascara Sagrada in Constipation.—New remedies succeed each other with such remarkable rapidity now-a-days, that, notwithstanding the ephemeral existence of the majority of them, a fresh series is ever ready to take their place, and "the cry s still, they come." Amid this infinite progression, t is pleasant and instructive to find even one agent that may be regarded as a valuable addition to the medical *armamentarium;* and that such an agent exists in cascara sagrada, time will, I think inevitably show.

Like many useful remedies, cascara sagrada (a term of Spanish derivation, and signifying "sacred bark") was well known to early writers, and is mentioned by Peter de Crescentius in a botanical work published by him in Bologna in the thirteenth century, in which it is recommended as a remedy for constipation. Its efficacy is also referred to by many continental authors during the seventeenth and eighteenth centuries. Verily, "there is no new thing under the sun."

At least three species of the rhamnaceæ are more or less known in medicine; viz., rhamnus catharticus (the common buckthorn), rhamnus frangula (the black alder), and the rhamnus purshiana, now under consideration. The former is such a powerful cathartic as to be now seldom or never used, and the second is still less laxative than the cascara sagrada. It is quite possible, however, that the aperient property which seems common to all the rhamnaceæ may be supplemented in each of the species by such other properties as might result from the action of analogous but not identical chemical constituents.

My attention was first directed to cascara sagrada by an American pamphlet which fell into my hands some years ago, since which time I have prescribed it with almost invariably successful results, and cannot but regard it, under favorable conditions, as a specific in cases of chronic constipation.

Cascara sagrada seems to act as a tonic to the pneumogastric and sympathetic supplies of the *primæ viæ*, aiding the general processes of digestion, whilst especially promoting those of nutrition and assimilation. At the same time, it so influences the secretory system as to increase deficient, and restore vitiated secretions, by regulating the action of proximate visceral and intestinal glands. From this it will be seen that its use is especially indicated in cases characterized by torpidity of the liver and an atonic conditions of the stomach and bowels.

Where habitual constipation depends upon derangement of the intestinal glands, with consequent defective or perverted biliary and intestinal secretions, associated with an adynamic condition of the muscular and nervous forces of the alimentary canal —involving congestion of the portal circulation, and also of the gastro-intestinal mucous membrane—the action of cascara sagrada will be found most satisfactory, and I have repeatedly known it to succeed in relieving and regulating the bowels when all the other usual remedies had failed. I am glad to find its usefulness is being recognized in British practice, and have little doubt that increased experience of its therapeutic action will be found to justify the encomiums pronounced upon its value by our professional brethren in America.

As far as my experience extends, I have seen no reason to withhold its use in any case of habitual constipation of a functional character, even in those occurring amongst children; but it must be admitted that it acts differently in different individals,some requiring more, and others less; in some, occasionally producing griping pains, while in most cases its action is quite painless. Symptoms of tenesmus can, however, be readily obviated, either by limiting the dose or by combining some suitable antispasmodic with the active agent.

In the numerous cases in which chronic constipation is associated with hæmorrhoids, cascara sagrada is of especial service, as its efficient action as an aperient relieves the venous congestion; whilst, instead of irritating, as many cathartics do, it seems to exercise a soothing effect upon the rectal mucous membrane.

With regard to the dose and mode of administration, I need scarcely say that, as in other cases, the physician should exercise some discretionary power in suiting the remedy to the morbid condition, and in combining it with such other remedies or adjuvants

* Annales D'Oculistique Mai-Juin, 1883, page 218.

as may seem desirable. My own opinion is that small doses, frequently repeated, will be found more satisfactory than large doses; and this is what we might naturally expect from the physiological action of the drug. When chronic constipation is complicated with flatulent dyspepsia, deficient gastro-intestinal secretion, and impaired muscular tonicity of the bowel, ten to fifteen drops three or four times a day, either before, with, or immediately after meals, will be found to give the most gratifying results. Two to five drops may be given twice or thrice daily to children of a month old. Except in one case, in which an overdose had been taken without medical sanction, I have never known cascara sagrada to produce any undue local or systemic disturbance, such as nausea, tormina, impaired appetite, or eructations; and, in fact, I know of no therapeutic agent which is altogether so reliable and satisfactory in the numerous class of cases to which I have alluded.

Ten or fifteen drops should be taken regularly twice or thrice daily for a week, after which time, if no material improvement has been effected, the dose may be increased until the bowels have been freely relieved, when it may be gradually decreased in amount and frequency until healthy intestinal secretions and increased peristaltic action have restored the alimentary canal to its normal condition. Lactopeptin, dilute hydrochloric and nitric acids, tincture of nux vomica, liquor strychniæ, glycerine, extract of malt, aromatic syrups, etc., may often be advantageously combined with the cascara sagrada, according to circumstances.

The preparation I have been in the habit of using is the fluid extract manufactured by Messrs. Parke, Davis & Co., and it has invariably given satisfaction. —R. A. Douglas Lithgow, LL. D., M. R. C. P. Ed., etc., in *British Med. Jour.*

Cotoin and Paracotoin.—In a careful and elaborate study on the action of cotoin and paracotoin, Prof. Albertoni comes to the conclusion that, unlike any other known drug, they produce an active dilatation of the abdominal vessels. This active dilatation is caused by no other substance, the action of cotoin being unique. Salvioli has shown that opium increases the blood-supply of the intestine, and Mosso that chloral has the same effect on the kidneys. But the dilatation caused by chloral and opium is not active, but rather parálytic, depending upon paralysis of the vessels. Chloral and opium diminish the blood-pressure. That cotoin should cause active dilatation of the abdominal vessels only, and have no influence on others, is in accord with what we know of the influence of other substances. Mosso has drawn attention to this subject; and the author has shown (*Lo Sperimentale*, 1881) that atropine, in certain doses, while it causes dilatation of the peripheral vessels, induces contraction of the cerebral vessels and that both these are contrary and independent. Cotoin is indicated in the diarrhœa which often occurs in the various forms of mental alienation. It is certain that in the diarrhœa of the insane defective absorption plays a notable part. In simple chronic intestinal catarrh, in the diarrhœa of wasting and cachexia, and in atonic diarrhœa, cotoin gives the best results. In the intestinal catarrh of drunkards, and in that accompanying hepatic cirrhosis, it has not proved efficacious. In the diarrhœa of phthisis it is very valuable, but not if there be ulceration of the intestines. It is very useful, also, in the diarrhœa complicating pellagra; this diarrhœa certainly depends on rheumatism of the intestine, which is often found much atrophied in *post mortem* examination. In the diarrhœa of teething children it is of great service. In cases of ulceration of the intestine, and where there exists a hyperæmic condition of the intestine with liability to hæmorrhage, it is contra-indicated. The author recommends large doses, 15 to 20 centigrammes (2.3 to 3 grains). These doses are well borne, and cause no unpleasant symptoms. It may be given in a wafer, or suspended in mucilage, which is the best if the stools be frequent, as absorption is easier. His formula is—cotoin, 40 centigrammes (6½ grains); bicarbonate of soda, 1 gramme (15·4 grains); water, 100 grammes; glycerine, 20 grammes. The solution, which is made by heat, is not perfect; the bottle must therefore be shaken before the dose is poured out. He also gives it with bismuth in mucilage. It is very useful in the night-sweats of phthisis. In dysentery it has not proved efficacious. Paracoto bark and paracotoin have the same physiological and therapeutical effects as coto bark, but their action is less active. Cotoin has no influence on the peristaltic action of the intestine, nor has it any direct astringent effect; its antiseptic and anti-mycotic properties are very feeble; it does not prevent decomposition of the urine, for example. It possesses a special action on the intestinal epithelium, stimulating its nutrition by its power of causing active dilatation of the abdominal vessels. When the function of the epithelium is disturbed, absorption is impeded, and food, etc., remains in the intestine only to be expelled by diarrhœa. In intestinal catarrh epithelium is thrown off in great quantity; the denuded mucous membrane allows matter to pass as through a filter. Cotoin does not cure all cases of diarrhœa, and is clearly not always indicated; but if the rationale of its action be borne in mind, and it be only given in suitable cases, it is a most valuable remedy in the treatment of diarrhœa.—*London Medical Record*, Oct. 15, 1883.

Abrus Precatorius.—Professor C. J. H. Warden (*Indian Med. Gaz* Dec. 1882), has investigated the poisonous properties of the seeds of this, the rati plant, which is much used in India in the destruction of cattle. For this purpose the seeds, which are almost inert when introduced into the stomach, are pounded, moistened with a liquid, and shaped into needles—"suis"—and, when dry, forced beneath the skin of cattle. The 'Chamar,' or skinner caste, appear to be the only class who adopt this mode of poisoning, and their object is to obtain the skins. Unless suspicion be aroused, and the skin of the animal very carefully inspected, the minute puncture caused by the spike is likely to escape detection. The *abrus precatorius* belongs to the natural order of luguminosæ, and is familiarly known as the Indian liquorice plant. The seeds are used as an external application in ophthalmia, and also for hæmorrhoids. When used subcutaneously, as in suis poisoning, there ensues considerable local tumefaction of the part to which the poison is applied, a lethargic condition of the animal, staggering gait and death. Occasionally suis wounds have proved fatal in the human subject. Professor Warden has obtained from the rati seeds two principles—a proteid body having proprieties analogous to those of emulsin, and a leguminous matter like amygdalin. A temperature of 100° C. destroys the activity of the seeds, apparently by coagulating the proteid body, in the same way as boiling water, when added to a mixture of emulsin and amygdalin, prevents the formation of hydrocyanic acid, by coagulating the emulsin. The proteid and leguminous matter present in the rati seeds, when introduced beneath the tissues, probably give rise to certain products, the result of a quasi-fermentative action, inducing changes in the blood incompatible with life.—*London Medical Record*, Oct. 15, 1883.

Pelletierine.—The termination *ine* so commonly used of late in the naming of nostrums, is sufficient to arouse suspicion when seen at the end of an unfamiliar term, and it is well to become familiar with the various scientific appellations which have the same ending. Pelletierine ($C_8 H_{13}NO$) is an alkaloid derived from punica granatum, discovered by Tanret, and named in honor of the chemist Pelletier. This alkaloid is a dextrogyrate liquid, boiling at 180° to 185°c, soluble in water, alcohol, ether, and very

soluble in chloroform. Its properties are strongly basic, it precipitating many metallic salts. The bark of the pomegranate root yield about .4 per cent. of this alkaloid.

M. Eisner, in the *Druggists' Journal*, gives the following process for the preparation of pelletierine:

Take 1,000 parts coarse ground pomegranate root bark and mix with some lime milk to a paste and put all in a glass percolator. Replace with water until 2,500 parts are obtained. Shake the liquid with chloroform repeatedly, and the latter again with water, to which some diluted sulphuric or muriatic acid has been added. The watery liquid neutralized with soda and dried in a vacuum over sulphuric acid will yield a salt mass with the pelletierine salt. Take up this salt mass with water, add sufficient carbonate of potassa and wash with chloroform, which will then take up the free pelletierine which after evaporation remains like an oily liquid and can be obtained as tannate in powdered form by precipitating the pelletierine from a solution in chloroform with tannic acid.

Ergotinine.—Ergotinine ($C_{35}H_{40}N_4O_6$) so called to distinguish it from the various ergotines, was found by Tanret in the ergot of rye. It crystallizes in fine prismatic needles is fixed, and, when well prepared, of a white color, it becoming colored however under the action of light. It is soluble in alcohol, ether, and chloroform. Its solutions are very fluorescent turning greenish and red in a short time. On the addition of sulphuric acid the color changes through red and violet to a not very decided blue. M. Eisner, according to *The Druggists' Journal*, states that it may be prepared by the following process:

Percolate finely powdered ergot with alcohol, add to the liquid obtained caustic soda, until it reacts strongly alkaline, and distill off the alcohol over water bath. Extract the residue with ether, and free the ether from the soap adherent to it by frequent washing with water.

The ethereal liquid separated, the colored watery part contains the alkaloid. Shake the same with a solution of citric acid. Pour off the ether and wash the ergotin citrate liquid with ether, add carbonate of potash sufficient which frees the alkaloid. Add ether again to obtain the alkaloids in solution. Decolorize the ethereal solution of the alkaloids with animal charcoal and distill. As soon as the liquid begins to get cloudy, stop the distilling of the same and stand it aside in a glass cylinder in a cool and dark place. After one day the alkaloid will be found deposited on the bottom of the cylinder.—*Weekly Drug News and American Pharmacist.*

Podophyllotoxin,—The active principle of our commercial podophyllin (an alcoholic extract) is a resinous, amorphous, bitter, and very active substance. Large doses produce vomiting, while smaller doses act as a cathartic. It is best prescribed in an alcoholic solution; an excess of water or alkalies will cause a precipitate. Administered internally it produces catharsis in four hours, but when used subcutaneously only two hours are required to produce its full effect. Clinicians value podophyllotoxin in obstructions of the bowels because it is so well borne by the patient, and even when employed for a long time it does not cause any gastric disturbances. It is especially indicated in chronic constipation when due to atony, and in icterus when caused by a catarrhal condition of the intestines. The doses recommended are about as follows: 0.02—0.07, p. dose, or 0.04—0.05 p. diem for an adult; in a child, 0.0006—0.0012 p. dose. The second dose should not be given until eight hours after the first one. This remedy acts more satisfactorily when administered in an alcoholic solution.—*Centralblatt d. gesamt. Therapie.*

Arbutin.—Dr. H. Menche, in the *Centralblatt für Klin. Med.*, states that arbutin is obtained from bearberry leaves (Uvæ ursi folia), and that he finds it to act in many cases as a valuable diuretic. Large does may be taken without any ill effects. It passes in the urine partly in the form of hydrochinon, which is closely allied chemically to phenol. Urine containing hydrochinon becomes, by standing, of an olivegreen color, just as it happens in carboluria. Arbutin is of service in urethritis even of a specific nature. Brieger has employed a solution of hydrochinon as an injection in gonorrhea, but the internal administration would seem to answer the same purpose. Arbutin is a glucosate (a compound of glucose with an acid—*e. g.*, tannin) and occurs as fine white stable acicular crystals, soluble in water, of neutral reaction, odorless, and of a slightly bitter taste. The best mode of administration is in the form of powder dissolved in a tablespoonful of water. Patients do not complain of its taste.—*Weekly Drug News and American Pharmacist.*

Cascara Sagrada in Adynamic Constipation.—Dr. Stewart in the Detroit Lancet, April 1883, gives an able article on adynamia. He first treats of vital energy, showing what it is; secondarily, he shows how it may be lost; thirdly, he describes some of the conditions brought on by the want of it, such as dyspepsia, diarrhœa, constipation, anæmia; and fourth, the treatment of adynamia by some of the more recent additions to the materia medica. One of the chief agents that Dr. Stewart advises in cases of adynamic constipation is cascara sagrada, the bark of rhamnus purshiana. It was introduced by Dr. Bundy, of California, but its present extensive use is due to the enterprise of Messrs. Parke, Davis & Co., of Detroit, Michigan. This article of Dr. Stewart's would be read with advantage in connection with Mr. Horne's remarks on cascara that occur in the London Medical Record, p. 198.—Richard Neale, M. D., in *London Medical Record*, Oct. 15, 1883.

Extractum Piscidiæ.—The extractum piscidiæ, a new remedy, belonging to the *Leguminosæ*, and known for some time in America as a hypnotic, has been tried in the Julius hospital with good effect (*Wien. Med. Blätter*, July 19). It has been found of great service in phthisis, causing a diminution of nightsweating and also of cough, without any unpleasant accompanying symptoms. The affect on the sweating was still more marked when atropine was given in conjunction with it, and only after some weeks were the pupils markedly affected. The extract is prepared by macerating 100 parts of the cortex of the root in 1,000 parts of dilute spirits for eight days, then filtering and drying to a powder, of which 0.25 to 0.5 gramme (3¾ to 7½ grains is given for a dose. —*London Medical Record*, Oct. 15, 1883.

Hoang Nan.—Prof. Thistleton Dyer, writing with reference to the recent announcement regarding hoang-nan, a reputed Chinese remedy for hydrophobia, says: "Quite apart from the extravagant virtues with which, as is usually the case with drugs of Eastern origin, the hoang-nan has been invested, there is no reason to doubt that it is a remedy of no small physiological potency. Plants nearly related botanically are apt to have similar properties, and when we find that the hoang-nan has, as first cousin, the species of *strychnos* yielding nux vomica, the wourali poison of Guiana, and the St. Ignatius beans of the Philipines, it will be understood that it is likely to possess one of the notes of the pharmaceutical efficacy, in that it is very likely to kill if it fails to cure.—*Oil, Paint and Drug Reporter*, Sept. 26, 1883.